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ABSTRACT

These two volumes comprise the proceedings of a conference on links between education and work and the power relationships in the wider culture and in its social order. Each volume begins with a "Foreword" (Ronald C. Morrison), "Preface" (Arthur Kruger), "Introduction" (David Corson), and author notes. Volume I contains seven papers: "Beyond Criticism: Convergence and Conflict in the Organization of Education and Work" (William Taylor); "Education for Prosperity in a Multicultural, Multiracial Society" (Veronica S. Lacey); "The Workplace Challenge: Learning a Living" (Douglas A. Stephens); "Pathways to Science: Career Transitions for Adolescents" (John H. Lewko, Carol Hein); "Facilitating Transition from School to Work in Japan: Why It Works" (Kaori Okano); "Women, Education, and Work in New Zealand: Choices and Chances" (Wanda Korndoerffer); and "Education and Jobs: A Proactive View" (Henry M. Levin). Volume II consists of 10 papers: "Training and Education: Disastrous Solitudes" (Alan M. Thomas); "Education and Work: A Narrow Focus We Cannot Afford" (James L. Turk); "Education for Work: An Educator's View" (Thomas F. Powers); "Work and Education: The Perspective of the Employer" (Kathleen Redmond); "Education and Work: A Graduate's View" (Dianne Hounsome); "Community-Based Education for Career, Work, and Life" (Aryeh Gitterman, Marion Levi, Suzanne Ziegler); "Life Roles, Life Chances, and Career Education: The Equity Imperative" (Avis Glaze); "Women in Nontraditional Occupations: Educational Strategies that Work" (Margaret Schneider); "Part-Time Work: The Underground Passage" (E. Lisbeth Donaldson); and "The Workplace Challenge: Learning a Living" (Douglas A. Stephens). Both

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The Ontario Institute for Studies in Education
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David Corson and Stephen B. Lawton, Editors

ED 420 798

Education and Work

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Education and Work

Volume 1

Proceedings of the International Conference Linking Research and Practice

March 1993

Acknowledgments

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David Corson
Stephen B. Lawton
Department of Educational Administration
The Ontario Institute for Studies in Education

The Ontario Institute for Studies in Education has three prime functions: to conduct programs of graduate study in education, to undertake research in education and to assist in the implementation of the findings of educational studies. The Institute is a college chartered by an Act of the Ontario Legislature in 1965. It is affiliated with the University of Toronto for graduate studies purposes.

The publications program of the Institute has been established to make available information and materials arising from studies in education, to foster the spirit of critical inquiry, and to provide a forum for the exchange of ideas about education. The opinions expressed should be viewed as those of the contributors.

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Foreword

Ronald C. Morrison
President, Kodak Canada Inc.

As Canada prepares for the 21st century, education, business, and government will need to engage in rethinking because globalization has arrived - in Canadian manufacturing, our service sector, and in our educational system.

Canadian educational institutions must meet world-class standards in order to provide the knowledge and skills needed to ensure a base of competitiveness for Canada. In the final analysis, the only sustainable competitive advantage Canada has is the capability of every Canadian to acquire and practice skills of the highest order.

Canada's future success begins with the quality of our educational system. Responsibility for the quality of our educational system is to be shared with employers, employees, educators and government. Employees need to demonstrate responsibility and willingness to improve their skills; management needs to create the environment and support systems to provide employees with the opportunities to acquire the learning needed for individual success as well as the success of the business enterprise.

Educators need to work closely with the business community to understand what knowledge and skills are relevant not only for today but also for the future. In particular, Canada would be well-served by the development of programs that deal with:

- the transition between high school and the work place;
- enhancing access to accelerated apprenticeship education;
- the continuous upgrading of the knowledge and skills of Canada's existing workforce;
- equipping high school dropouts with skills that will enable them to obtain meaningful jobs;
- improving the knowledge and skills of Canadian educators; and
- education of Canadians about competitiveness issues.

The rest of the world is not waiting for Canada to debate and define its educational strategies and policies. Canadians must be aggressive in formulating the educational expertise that develops the skills, values, and knowledge needed to participate in an increasingly competitive global economy.

Kodak Canada's sponsorship of the Education and Work Conference, organized by The Ontario Institute for Studies in Education, is consistent with our sense of urgency about the need for fundamental change in Canada's system of education. We are particularly pleased to support the publication of the *Proceedings* in order to disseminate information and opinion to the widest possible audience.

At Kodak Canada we believe that the future belongs to those who are prepared. We are confident that Canadians can and will meet the challenge of the global economy.

Preface

Arthur Kruger,
Director, The Ontario Institute for Studies in Education

For many years *Lifelong Learning* was a slogan devoid of meaning both in institutions of higher education and in industry. Universities admitted part-time students but often had policies relegating them to second-class status. Corporate presidents spoke glowingly of the importance of education but did little or nothing to facilitate continued formal learning by their employees.

The rapid economic changes in recent years has led to a rethinking by decision-makers of the important linkage between education and work. Colleges and universities are accommodating to a changing student clientele. Many of today's students are older than the 17 to 22 year-old cohort and even full-time younger students usually hold jobs while at school. Industry is looking closely at both the preparation of those newly entering the workforce, and the need to upgrade the skills of those already employed. Education takes place both in educational institutions and at the workplace.

To Professor Lawton and his colleagues, our thanks for organizing the Education and Work conference and for producing these volumes. To Kodak Canada, our gratitude for their support for these important ventures.

Introduction

David J. Corson
The Ontario Institute for Studies in Education, Toronto

A conference on this topic has a range and scope that is very wide indeed. I've prepared a short statement about "education and work" to reflect the wide interests of an Institution like this one. I hope you find that your own interests are comfortably covered by our brief.

"Education and work" extends across a broad range of human activities. "Work" itself refers to human activity that goes well beyond the narrow view of work, in the sense of "a job". "Education" too reaches well beyond the kind of training that some might argue is needed to prepare people for work, in the sense of a "job". "Education" also goes well beyond the processes of formal schooling to which it is sometimes restricted.

When people in education think of work, we think of it as a basic human activity. Work is a part of a normal healthy life; it is a physiological necessity. So work is more than a commodity to be sold on the market for maximal return. It has great intrinsic value for modern individuals and groups. Work is a vital component of the human essence. It defines our individuality; it can distinguish for others our preferred way of life; and it lays the important building blocks for self-esteem that come when individuals and groups have distinguished marks for their identity.

Meaningful work, then, responds to an essential human need; it offers most people their best chance in life of having the necessary good of self-respect. But because meaningful work in our culture and the self-respect that goes with it, are usually linked with having employment, then we should recognise that special value of work and plan accordingly for full employment as a high social priority and social value. But under contemporary conditions, full employment is not available to us; yet, where unemployment is high, the role of education about work is even greater. Other kinds of work activities that are not formally seen as employment, assume more importance. And the worth and significance of these other work activities need to be communicated to people, if those without employment are not to be deprived of that necessary good of self-respect.

Educating people about work involves passing on the values of a community so that those being educated can have a choice about making those values their own. In our culture, knowledge and understanding are highly valued. But educated people need to be more than just knowledgeable. They need to possess knowledge that is built into the way that they look at the world; and they need critical and analytical skills to heighten the quality of their judgment in applying that knowledge. Not much of this comes from processes of training, because training is directed towards some end beyond the task of training, while education is a good in itself.

Being educated is much more than being highly trained. It involves the possession of a

body of knowledge, along with a conceptual scheme to raise that knowledge above the level of a collection of disjointed facts. Education's aim is the development of critical and rational autonomy. Reflective human beings need to understand the reasons behind things, and this is an understanding that training on its own not just fails to supply, but which it can obscure.

So it is wrong to believe that education can be linked with work through some vast process of training. But the link is still a plain one: education must include work as a central feature of its curriculum, because work permeates the normal and necessary range of human activities. In exercising a minimum skill, men and women are "at work", whether that work is in the form of a job, a craft, a hobby, an act of caring, an act of taking responsibility, or any other worthwhile human activity.

So we believe that the kinds of things that reasonably fall within the scope of "education and work", and a conference with that title, will included education and work activities and contexts of every kind.

By this we mean not just school, college, and university education; but also workplace, home-based, distance, and community education. By this we mean not just schooling for work that uses conventional approaches to curriculum, pedagogy, and evaluation; but also schooling that promotes forms of critical consciousness, and personal and group empowerment of a kind that is not always provided by conventional approaches to schooling.

By this we mean not just education for children and young adults; but also education for those kept at a distance from both schooling and employment, whose needs may be addressed through adult literacy, basic education and other special education programs, through new horizons activities for people tied to the home, and through child and adult migrant education programs.

By all this, we mean a conference that throws light on the links between education and work, while critically addressing power relationships in the wider culture and in its social order.

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Beyond Criticism: Convergence and Conflict in the Organization of Education and Work

William Taylor
Oxford University

Introduction

A keynote address at an academic event is not a carefully documented state-of-the-art paper or research report. It points directions rather than draws conclusions. The reader is asked to remember that what follows was written to be heard rather than read.

In this address I discuss three ways of looking at relations between education and work - three models of that relationship if you like - such as might have been presented to teachers in training at various times since mid-century. If I wanted to be portentous, I could call them meliorist, Marxist and anti-modernist. I could, but I won't. Labels - particularly these labels - can mislead. So, without originality, I shall call my three models A, B and C. There is overlap between them. Although strong social, economic and political forces now support Model C, residues of both A and B still influence the perceptions and actions of teachers and administrators.

The Elements of Model A

Once upon a time, teachers were presented with a version of the relations between schooling and employment that for the purposes of this address I call "Model A". This was not described to them, as it might have been, as both part of and reaction to the project of modernity. Nor did those who incorporated elements of this model into their thought and their teaching always recognize the rich variety of sources on which it drew, its debts to Ruskin and to Morris, to Protestantism and to Marx, to Montessori and to Dewey. They did not regard what they were doing as political, as a protest against the consequences of industrialism for character and for community, or as a fig leaf for capitalism. They were much more aware, because of the worldwide conflicts of the first half of this century, of the need to counter the evils of nationalism, of racial prejudice ("racism" is a term of more recent coinage), and of the excessive claims that totalitarian states made against individuals.

Model A assumed that at the end of compulsory schooling there would be paid work or further study available for all. This stood in sharp contrast to experience in many industrialised countries in the second and third decades of the century, but chimed with post World War II reality, and with the commitment of governments of all political shades to full employment.

Second, it was thought that through technological innovation and improved management, the proportion of physically dangerous and psychologically damaging tasks that men and women were required to undertake would steadily decline, and the proportion of occupations capable of yielding individual fulfilment and of stimulating personal growth increase.

Third, Model A asserted that with better information and guidance, there would be improved fit between the abilities and dispositions of individuals and the requirements of the workplace. A higher proportion of pupils would be able to pursue worthwhile careers. Always careers, not just jobs. The ordered progression of school life was carried forward into employment. Runciman (1990) has defined a career as a role to which in-built prospects of promotion into another and more highly located role are institutionally attached. Careers imply the possibility of mobility. That a significant proportion of school

leavers would enjoy no such prospects, and might spend a life time on a day-wage basis without real prospects of enhancing their skills and rewards, was difficult to accommodate within this model of the relations between education and work.

A fourth element of Model A was the belief that through workplace organization, professional association, and the continued development of participative management practices, better opportunities would exist to develop and to demonstrate the civic virtues learned in school and to deepen the roots of a democratic social order.

Fifth, although the influence on motivation and choice of work of the family and of "significant others" in the community was recognized, the experience of schooling was taken as central to the development of work-related attitudes and aspirations. The school, together with school-based agencies, would be the main source of information about employment opportunities.

Sixth, Model A suggested that with a reduction in the length of the working day, longer holidays, better cultural and recreational opportunities, and easier communication, more people would pursue leisure activities that fostered interpersonal understanding, craft skills and aesthetic sensibility, contributing to a gradual process of cultural refinement.

Seventh, even if status differentiation on the basis of class and income was unlikely in the short run to disappear, it would become less important as a consequence of common schooling, selection on meritocratic principles, a steadily rising overall standard of living, progressive taxation, and when the necessity arose, the safety net of welfare benefits.

Finally, Model A embodied moral imperatives. Whatever the nature of his or her talents, occupational destination and social contribution, each and every child had equal entitlement to teachers' consideration. Individual needs were paramount. Rawlsian morality - equality, general norms, universality, and the two fundamental principles of justice, those of Greatest Equal Liberty and the Difference Principle (which states that inequalities should be such as to benefit the least well off in society) - was implicit. Everyone was capable of some form of success. Whatever the harsh realities of the working world, it was the task of the school to identify and to nurture individual talent in the hope and expectation that this would find some recognition in or beyond employment.

Model A was rational, humane, rooted in well rehearsed principles of progressive education and social thought. It said a great deal about the experience of economic depression in the 'thirties and the hopes of the post-war 'fifties. It also left a great deal unsaid.

Scant attention was given to the realities of economic and social differentiation. Social mobility was not a smoothly running escalator. It was, and remains, a shaky ladder with a lot of broken steps, no guarantees as to access or speed of ascent, and some nasty splinters waiting for those coming down.

Full employment was not to prove secure. In Britain, it was said to exist when no more than about 300,000 or so lacked work due to "frictional unemployment". The current figure is in excess of three million.

The pupil's six hours with pen and paper or in front of white - black chalk boards soon had competition from the seductive coloured images of the small screen.

Contrary to expectations, the length of the working week has changed little in the last 40 years.

And the underclass has refused to go away.

Radical educators would later underline these omissions in developing a version of relations between education and work that I want to call Model B.

Model B - the Radical Critique

Initially at least, Model B had greater intellectual coherence than the view it sought to replace. Its roots were in Marxism and a counter-factual attitude towards the project of modernity. Students training to teach were introduced

to the work of sociologists of knowledge, revisionist historians and critical theorists. The unreality of the hopes and aspirations that had fuelled Model A were exposed. Individualization was a sham. The principal function of education was to serve capitalism's purposes. Curriculum, pedagogy, even the physical arrangement of the classroom, were de-mystified and unmasked, shown to be coherent with a particular set of economic arrangements and its attendant social praxis. Careers guidance and counselling merely compounded the influences of class, gender and race.

To this audience the elements of Model B will be very familiar. Its internal consistency must not be overstated. The respective contributions of the younger and older Marx, of Gramsci, Habermas and half a dozen other seminal contributors were argued over in the 'seventies. They continue to attract attention today.

It was Enrico Fermi, I believe, who said that one should never underestimate the pleasure we feel from hearing something we already know. It is tempting to say much more about Model B. I shall resist the temptation.

For some students, the insights on curriculum, pedagogy and professional praxis offered by this approach were exciting and enlightening. Others were less enthusiastic. Model B spoke to the conditions of its time. It was reflexive, sceptical, iconoclastic, and disrespectful of existing authority. Long in theory and analysis, it was short on programme. The role of foot soldier in the long march through educational institutions was hardly a viable option for most beginning teachers, preoccupied as they were with gaining the attention and respect of their own isolated platoons, cut off from help within the four walls of the classroom. A description of a pupil's objective situation vis-a-vis the labour market would hardly help him or her to find satisfying employment.

Pupil resistance, comprehensible as it might be, did nothing for a teacher's self-esteem when expressed in the classroom. A very few teachers identified themselves with such resistance. They sought to counter what they saw as the forces of oppressive capitalism in education. They tried to inform the content of their teaching and the style of their presentation by these convictions, and to make their pupils aware of and responsive to the "realities" of what awaited them in the world of work. The number of teachers who made this effort was not large. However, when demonized by their opponents, their influence on subsequent events was considerable.

Some who examined the relation of education and work in Model B terms saw the crisis of capitalism as terminal. Few, however, had any great enthusiasm for the types of state socialism practised in the Soviet Union, in Eastern Europe and elsewhere. It was difficult for them to point to any set of educational arrangements, anywhere, that wholly avoided the oppression, systemic reproduction, inequality and socially biased credentialism that critical theorists identified. Ten years after the oil shocks of the early seventies, capitalism as a world system was showing little sign of imminent collapse. In education, there was fresh concern with content, knowledge and skill - not least on the part of teachers themselves. Being a "reflective practitioner" was not enough. As Barrow (1990) has written:

> *The 'reflective practitioner' is, if not an empty phrase, at any rate a largely rhetorical one. The popular idea may be that to conceive of the teacher as a reflective practitioner is to draw attention to a special kind of thinking appropriate to practical issues, but a reflective practitioner is no more than one who practices in a thoughtful kind of way. The all important question remains 'in order to be thoughtful in a sound and profitable way what do you need to know and understand'.*

The Global Context

In the United States, in Australia, Great Britain, Canada and every other English speaking or multi-lingual industrialized country in which it was influential, Model B has been under attack. Especially so where governments see the attitudes and orientations towards work that schools encourage as important to enterprise, entrepreneurship and economic success. Here is an extract from one of the National Curriculum documents in England (NCC 1990).

> *Pupils need education for economic and industrial understanding to help them*

> *contribute to an industrialised, highly technological society. With increasing economic competitiveness, both in the European community and worldwide, the nation's prosperity depends more than ever on the knowledge, understanding and skills of young people. To meet this challenge pupils need to understand enterprise and wealth creation and develop entrepreneurial skills.*

Similar concerns apply to the university. This is from a statement about the enterprise in higher education programme in England:

> *. . . every person seeking a higher education qualification should be able to develop competencies and aptitudes relevant to enterprise these competencies and aptitudes should be acquired at least in part through project based work, designed to be undertaken in a real economic setting, which should be jointly assessed by employers and the student's higher education institution* (Employment Department Group, 1991).

The roots of Model C are thus as much in economics as those of Model B. But a very different kind of economics. In addition, wider cultural considerations now feature in the discussion, and on a global canvas.

The majority of today's conflicts are not between capital and labour, but between groups with different cultural histories and identities. The idea of "one world" has turned out to be more complicated and difficult than proponents of Model A envisaged. In those parts of the globe where sheer numbers push us closer and closer together, the result is not always peaceful coexistence or the stimulation of a single cultural identity with multiple roots, but a sharper awareness of difference and sense of threat.

Patterns of schooling and of work, and the management of the transition between them, can also be very different in countries superficially at similar stages of economic development. Rosenbaum and Kariya (1991) have underlined the differences in the weight attached by employers to high school grades in the United States and Japan respectively.

There is strong evidence that in the United States, high school grades count for very little in recruitment. Even less as far as subsequent progress and promotion are concerned. In Japan, on the other hand, formal and informal arrangements exist whereby a substantial proportion of high school leavers are nominated for jobs by their teachers (see Okano, this volume).

Contrary to the suggestions of Bowles and Gintis (1976), non-cognitive factors do not much affect this pattern of sponsorship. But neither do grades count for much in the open market recruitment system of the United States. Furthermore, although they may be an imperfect basis for forecasting subsequent performance, they are more meritocratic, and less likely to be affected by irrelevant criteria such as social background or race, than the "holistic" assessments favoured by some students of the school-to-work transition.

What I am here calling Model C is in part a response to a level of global inter-dependence quite different from that envisaged by advocates of Models A and B.

Despite many hiccups, trade barriers are being reduced. Money flows freely from one country to another. The multinationals become more important every year. Factories in Canada, as elsewhere, source their components anywhere in the world. Transport and communications have been revolutionized.

People, too, are on the move. You and I patiently wait in line at immigration, alongside those others who like us are travelling for business and to attend conventions, to see the increasing scattered members of our families, to seek out the diminishing numbers of unspoilt beauty spots. We possess return tickets. When in due course we depart we will leave nothing behind except our money. We are thus welcomed at our destinations.

As we wait we look curiously at those standing in a different, even slower moving line, or sitting anxiously in a side room. Here are those who hope they have come to stay. They are the better-heeled air travelling minority of those vast armies, who, given the option, some fear would

flow across frontiers in search of work and a better future and of whom the boat people have been the most visible and distracting, but by no means the potentially most numerous representatives.

Within the coming decade we can expect these tendencies to globalization to be reinforced by changes already underway. In Europe, we have the single market. Halting though progress have been, and difficult as it will continue to be, some form of European monetary union is likely to exist in the next century. In the states of the former USSR and more slowly, but nonetheless perceptibly in China, market economies are emerging.

The integration of the world economy has important implications for the nature and distribution of work. A global range of choice for investment locations encourages companies to move to areas with low labour costs. Global sourcing for production, global markets for products and services, global flows of investment funds and profits, and the global interaction of capital markets and national economies can all lead to large scale movements of employees. All this inevitably put limits on the extent to which national governments can control the conditions under which industry operates within their own borders. Decisions taken in one country spill over into others.

In nearly every industrialized and industrializing country, economic success is now seen to depend on having available a number of men and women with high level technical and scientific and managerial knowledge and skills. There remain, however, even in the developed world, great contrasts in levels of education; many countries have a good deal of catching up to do. Awareness of this has led to government intervention in education at all levels, from primary school to university; teaching and learning have become too important to be left to the educators.

The Emergence of Model C

Like A and B, Model C is not wholly self-consistent. Its analysts do not always agree about detail, especially in respect of implementation. Like its predecessors, it is part fact, part forecast, part aspiration.

Typical Model C notions are the replacement of muscle power by mind power, the decline of manufacturing, and the inexorable rise of businesses based on the provision and circulation of information and of services. Flexible production (low volume, high value added and niche markets), the contracting-out of many functions on a fee-for-service basis, the application at all levels of computer technology, and a prime commitment to quality and to customer satisfaction (or "delight" as the latest formulations have it) also feature.

Full employment is no longer assumed - not just because of the vagaries of the trade cycle and the effects of short term recession, but because a proportion of people are unemployable. Their efforts, however conscientious and sustained, do not add enough value to pay their wages. Education and training beyond the high school are not simply a privilege for a minority, but a necessity to ensure any kind of useful employment beyond the diminishing number of opportunities that still exist for the unskilled.

At other levels, the notion of a continuous career from high school or university graduation through to retirement is becoming less and less relevant. In conditions of economic turbulence, companies, and activities within corporate groups, come into existence and disappear with increasing rapidity. Specialist functions are contracted out. It is not just the day-waged who are at risk from redundancy and technological change. A larger proportion of people pursue what have usefully been called "portfolio" careers, undertaking two or more part time jobs in parallel or a series of sequential short term assignments. Even for those in full-time permanent employment, technology and new markets force major changes in roles and rewards.

Post-Taylorist and post-Fordist patterns of industrial organization are flatter, less formal, integrate tasks rather than divide them as in Adam Smith's pin factory, emphasise team work and require higher standards of initiative and judgement than many production line operations.

Wirth (1993) has suggested that post industrial work requires that we approach the world in a radically new way.

> *The shift is from a world view founded on notions of mass production, which was atomistic, hierarchical, manipulative, and dualistic, to a perspective based on symbolic analysis, which is interactive, decentralized, contextual-intellective, non-hierarchical, and participative.*

Cannell and Wood (1992) have outlined some of the ways in which work is changing in the context of the calculation of reward. They suggest that we are moving from conditions of limited competition to those of more intense competition; standardization is giving way to flexibility and innovation, long-runs to short-runs; production systems are customer rather than product driven; quantity is surrendering to quality; the work team is assuming new importance, not just in the steel mill but in the office; training in fixed tasks is replaced by concepts of continuous improvement; inspection and re-work are replaced by "right first time"; active and intelligent involvement is valued more highly than unthinking conformity; skills for life become less important than the capacity to acquire new skills; job insecurity increases; rewards are more closely tied to achievement; job-based systems are put aside in favour of people-based attempts to control and to direct the culture of the workplace.

Some Model C analyses of changes in the world of work have a relentlessly upbeat tone. But there are social and personal downsides in a world of portfolio careers, small scale and devolved enterprises, performance related pay, teleworking and the global movement of labour. Unemployment can still bring down governments.

One such downside has to do with the position of younger males. It is not necessary to be a socio-biologist, or to have closely observed the behaviour of elephant herds, to realize that the use society makes of the strength and solidarity of its younger males can be critical for the quality of life of those outside this group. In conditions of war, their contribution can determine others' survival. When much of the world's work was physical they were of key importance to economic success. But in a Model C world their strength and solidarity can be a handicap. A high proportion of the crime that besmirches urban life is committed by young men. Those least tolerant of racial and cultural difference, and most prone to the attractions of strong leadership can be found among them. Without adequate training and post-secondary education, their employment prospects are poor.

Model B had much to say about gender stereotyping and lack of opportunities for women. It has been argued that the forms of industrial organization and the patterns of working life implied by Model C, the emphasis on flexibility, adaptability and intuition, the dysfunctionality of the traditional "male ethos", are all consistent with genuine, as distinct from legalised or token, gender equality. We shall see. The attention given to these matters, plus current demographic and economic trends, are at least raising if not removing the "glass ceiling" in the professions, in the public service and in management below the level of the board room. The number of women chief executives of major companies remains small. Male domination of educational administration, especially at the secondary level and beyond, continues. But we must not underestimate the changes that have already taken place and which are working their way through.

Model C analysts tend to underestimate the extent to which technology has deskilled many occupations, in the performance of which better working conditions and a concern for customer delight are not always fulfilling substitutes for challenging work with hand and eye.

A further omission is the mismatch between the expectations and the skills generated in courses of advanced training and the limited use to which these are put in the workplace. (For a corrective view see Brown, Reich & Stern 1990).

Another downside issue is how, at all levels from classroom to boardroom, individuals cope with the increased risk of failure posed by some aspects of a Model C working world. Every new opportunity for success provides another for failure. As Delcourt (1991) has argued, competition and change create greater risks of a dual society.

This is undoubtedly one of the main problems with which our societies are and will be faced. As the requirements of society as a whole rise, the increasing number of people left by the

wayside and marginalized may well make social problems in the areas of work, life and accommodation more acute.

This is now the stuff of the burgeoning literature on changes in the concept of work. What are the implications of the working world thus depicted for the activities of schools and teachers? Such implications are clearly not limited to transition processes, to the provision of information and advice on job choice. If demographic pressures - something like one-third of the whole population in developed countries by the end of the century will be between the ages of 50 and 75 - information based technologies, and industrial nationalism and regionalism in the context of a global economy do have the effects predicted for them on the organization of the work place and the nature of employment, then our whole approach to educational organization, curriculum and pedagogy is at stake.

The Educator's Response

Within capitalist regimes, personal accumulation and the pursuit of individual and corporate profit increasingly determine the criteria of success (Heilbroner 1988). Many teachers, especially those who still adhere to the values of what I have called Model A, regret this focus. They wish some other principle was consistent with capitalism. Because they have given precedence to relationships among people, rather than personal achievement or possessions, they often value a curriculum and pedagogy that stresses cognitive and aesthetic development, the importance of the inner life of meaning and feeling, rather than the virtues of success as a consequence of competitive action.

Such an orientation has roots in sacred traditions (not, today, all of them Christian) which despite the decay of religious institutions in some countries, continue to influence attitudes and behaviour. Contemplation, humility, altruism, self-sacrifice, resignation, the comparative unimportance of the present in relation to the hereafter, a concern for the underprivileged and the deprived, all permeate the structure and process of schooling and blunt the edge of efforts to introduce a more competitive, market oriented regime into the provision and administration of education.

Governments have a hard row to hoe in engineering changes in professional culture that foster enterprise, improve productivity and help generate the resources required to maintain and enhance the overall quality of life. This is not simply a problem for the right. Social democratic governments confront similar tasks.

To incorporate within Model C the aspiration of Model A to provide some form of success for every pupil which gives dignity and meaning to work, provides motivation for further effort, and enhances commitment to socially responsible behaviour is no small task.

The project of creating "parity of esteem" between institutional sectors - grammar and vocational schools, universities and polytechnics, manual and professional employment - depended on accepting the legitimacy of hierarchy, authority and status. But it was not simply advocates of critical theory who pointed out that parity of esteem for different educational paths could hardly exist when their destinations were so different in terms of working conditions, pay and social standing. To win in a race open only to the second rate was not real success.

Few, if any advanced societies have cracked this problem. The wider the range of opportunities they offer, the higher the expectations they generate, the fairer the rules of the competition, the greater are the possibilities of failure. Diversifying the forms of success can only work when penalties for failure are tolerable. In creating societies in which an individual's life chances are no longer entirely ascribed by family, we have made a Faustian bargain. It will not easily be renegotiated, least of all by any once-for-all makeover of the school system or by improving vocational counselling and guidance.

There is no shortage of predictions and prescriptions as to how schools should respond to a Model C world. Inevitably, these take down from the shelf, dust off and recycle many earlier ideas and practices.

Unreconstructed advocates of Model B often point to the ability of capitalism to co-opt the counter-culture. They draw attention to the ideological purposes served by much of the contemporary management literature, and the extent to

which the current quality-project entails forms of social and institutional control little different in their impact on the person than earlier authoritarian and hierarchical forms.

Model C has given heart to those who see the new work place as requiring and justifying approaches consistent with "progressive", student-centred, enquiry-based, thematically-organized pedagogy. They seek to inject new life into educational values implicated in the events of 1968 - "stressing the virtues of relative equality, of network forms, of creativity, the abolition of hierarchy, and the redefinition of work as play" (Mulgan 1988). Reich (1991) has argued that there is an increasing need, at all levels of the work place, for the skills of symbolic analysis - abstraction, system thinking, experimental enquiry and collaboration.

There are also individuals and organizations whose response appears to confirm the forecasts of critical theorists by demanding fresh emphasis on traditional subject-based learning. Yet advocacy of the importance of mathematical skills, knowledge of physical laws, the acquisition of historical facts, and an emphasis on language competence rather than creative literary expression may be less the traditional spirit of Gradgrind than a realization that structures, canons, distinctive methodologies and a publicly attested literature all facilitate empowerment. As was recognized many years ago, *any* well-taught subject can be educative in the sense of developing understanding, judgement and discrimination.

Much theme and project work, including some of that intended to facilitate the transition from school to employment, has lacked conceptual progression, has failed to stimulate curiosity and encourage self-motivated enquiry, and has demanded knowledge and understanding that not all teachers possessed.

Some of the best recent work on generic forms of knowledge and learning skills and strategies has been done by specialists in post-school vocational education, identifying the cross-curricula competencies and capabilities that contribute to employment success. Such analysis needs to be informed by work place knowledge that goes beyond the demands of particular forms of employment. As Squires (1987) has pointed out, the derivation of vocational curricula from detailed job analysis is not straightforward. Among factors that make for difficulty are lack of fit between occupational and training classifications; the interaction of vocational qualifications and jobs, where the influence is not always one-way; the diversity that may arise from apparently similar work being carried out in different environments; the changes that take place in employment, with the need to strike the right balance between present and future needs; the realities of job substitution, with many people performing "below" the level for which they have been trained, others "above"; the divergence of vocational curricular from job needs due to academic drift and technological upgrading in the work place; the incompleteness of job analyses and labour contracts and the significance of what has been called the "invisible handshake" and, finally, the difficulty of pitching training at the right level, with particular respect to the creation of false expectations on the one hand and the wasting of money on "overtraining" on the other hand.

Conclusion

There is nothing easy about governing advanced societies in the closing years of the 20th century. Reconciling group interests, satisfying individual expectations, and making sustainable the world we inhabit, pose demanding tasks for every politician, every administrator and every educator. If features of what I have identified as Model C are what we face in the years ahead, how should the educator respond? For such response to be effective, a better understanding of the relations between education and work is essential. I am sure this event will provide a welcome opportunity to advance such understanding.

References

Barrow, R. (1990) Teacher education: Theory and practice. *British Journal of Educational Studies*, 38(4), November.

Bowles, S. & Gintis H. (1976) *Schooling in Capitalist America*. London: Routledge & Kegan Paul.

Brown, C., Reich, M. & Stern, D. (1990) *Skills and Security in Evolving Employment Systems*. Berkeley: University of California.

Cannell, M. and Wood, S. (1992) *Incentive Pay - Impact and Evolution*. Institute of Personnel Management and National Economic Development Office.

Delcourt, J. (1991) Qualifications: A social construct. *Vocational Training*, 2.

Employment Department Group (1991) *Enterprise in Higher Education*. London: Department of Employment.

Heilbroner, R. (1988) The coming meltdown of traditional capitalism. *Ethics and International Affairs*, 2.

Mulgan, G. (1988). The power of the weak. *Marxism Today*, December.

NCC (National Curriculum Council) (1990) *Curriculum Guidance 4*: Education for Economic and Industrial Understanding. York: The Council.

Reich, R. B. (1991) *The Work of Nations: Preparing Ourselves for the 21st Century*. New York: Knopf.

Rosenbaum, J. E. & Kariya Takehiko (1991) Do school achievements affect the early jobs of high school graduates in the United States and Japan? *Sociology of Education*, 64, April.

Runciman, W. G. (1990) How many classes are there in contemporary British society? Sociology, 24(3) August.

Squires, G. (1987) *The Curriculum Beyond School*. London: Hodder and Stoughton.

Wirth, A. G. (1993) Education and work: The choices we face. *Phi Delta Kappan*. January.

Education for Prosperity in a Multicultural, Multiracial Society

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Canada is at a critical crossroad. No matter in which direction we turn, there are signposts of hard economic times. Prosperity no longer seems so easily within our grasp. And while Canada, like other countries, is in a recession, we must not make the mistake of shifting all the blame in that direction alone. Nor should we sit back, fingers crossed, hoping that President Clinton will kick-start the US economy and spin-offs will come our way.

We must take the offensive.

We have watched Canada's deficit spiral to where today the total provincial and federal government debt is $665 billion; where the debt matches our Gross Domestic Product (GDP). We have felt the fall-out from the adjustment to the Canada-US Free Trade Agreement; fear increased fall-out with the North American Free Trade Agreement (NAFTA); and are involved through the General Agreement on Tariffs and Trade (GATT) in the most ambitious multilateral trade negotiations since World War II.

There is no escaping that we must think globally if we are to stay in the game.

If we are to prosper, we must address how we do business - our management, our labour, our products and services, their quality, their markets, the environment within which businesses work, and their ability to change, adaptability, training, and innovation. Old style companies have been dealt a body blow - many have died, others are hemorrhaging. We have double digit unemployment and those with jobs are concerned their pink slips may be next.

Canadians are feeling nervous, destabilized. They want their equilibrium - and the country's - restored. They want leadership. They want solutions. And in their search, quite understandably, they are taking a close look at our institutions. Consequently, education along with business, labour and government is under close scutiny.

This scrutiny is not misplaced. Our future and that of our children's are at stake.

As Canadians we must face the facts that:

- We are not fully engaged in the global economy; our exports are losing market share;
- We are falling behind our competitors in applying new technologies;
- We are not attracting enough investment.;
- For decades we have heard from a variety of studies and sources that Canadian companies must increase research and development. This is still true and sorely needed today;
- We need to encourage more innovation in our products and services making the "Made in Canada" label synonymous with quality and state-of-the-art design.

- Canada falls far short of more successful countries, like Japan and Germany, in skills development and training for their workers;

- Too many young people are not ready to start school and too many are leaving ill-equipped for work;

- Too many adults are permanently sidelined by a lack of skills; and

- Too many people are being excluded from education and training.

I could add to this list, but I think the idea is clear.

It is not my intention to depress you. The facts should not cripple us but rather challenge us to reverse the statistics. The more we understand the problem, the greater our chances of creating solutions.

As one of 20 members on the federal government's Steering Group on Prosperity, I had the privilege to hear from Canadians from the East to the West to the North of this country; to hear from individuals and groups in hearings, submissions, conferences, workshops, roundtables and focus groups. The breadth of knowledge and experience we encountered was impressive. The Steering Group made every effort to remain faithful to that wisdom in their recent report: *Inventing our Future: An Action Plan for Canada's Prosperity.*

What struck me most profoundly - and what I hope I can convey to you at least in part - was that these people, who represented all sectors of society and all parts of the country, had nothing but robust resolve to create a better future for Canada and Canadians.

And make no mistake, it will take the participation of us all. No one sector can solve our problems. We will succeed if we work together - as a family, a community, a province or territory, a country.

We will succeed if business, labour and government unite for the common good.

This is not just romantic idealism, it is cold, practical, bottom-line fact. By working together we can create an environment for success - success for individuals, for business, for Canada.

The *Prosperity* report contains 54 recommendations and sets out an action plan in three parts. The first part offers suggestions for building a stronger, more competitive economy; the second addresses ways of improving our education and training systems to achieve better results; and the third recognizes that Canadians want an inclusive society that allows all individuals to maximize their potential and own a stake in Canada's prosperity.

Of the 54 recommendations, 25 are directed at improving the productivity, efficiency and competitiveness of business, labour and government. Some of the recommendations are new, some have been made many times before but were never implemented, and some have been tried but only on a small scale or sporadically at best. What we are calling for is a coordinated, comprehensive strategy that is effectively implemented and monitored - and we have set out how we think this can best be done. If you are interested in the details, you can obtain a copy of this report, but I will provide some of the highlights.

- Canadians know that we cannot compete with low-wage countries but we can compete in the areas of quality and brain power. Therefore the report recommends a Canadian commitment to quality - a coordinated approach in all sectors, through a National Quality Institute, to help companies and public sector organizations become world leaders in quality: quality management, quality workforce, quality products and services.

- Along with quality, the report encourages greater use of existing technology, plus a strong emphasis on developing new technologies, and generally fostering a pervasive innovative spirit that

will give Canada a world-wide reputation for producing the best.

- The best can only be achieved with the cooperation of people. The Steering Group therefore promotes improved management, labour–management teamwork, and skills development for workers. For example, the report recommends a comprehensive, nation-wide collaborative labour-management approach to retraining and qualification standards across the country;

- Canadians recognize that in order to ensure our prosperity, global trade and investment must play a greater part in our economy. The Action Plan therefore recommends a coordinated private sector strategy aimed at doubling the number of Canadian firms that export;

- Canadians expressed their concern for the environment and want Canada to gain the competitive edge in meeting the worldwide demand for "green" products, demand that is estimated to grow to $375 billion by the end of this decade. To meet this goal, we recommend a Centre of Excellence for Sustainable Development.

- Financial institutions are asked to adopt a more entrepreneurial and innovative attitude. We ask them to broaden their focus from primarily hard asset-backed lending and investment to knowledge-based capital. This change would require the investors to have more specialized knowledge of specific industries and make them better able to evaluate the risks and prospects - particularly for new, small and middle–sized businesses.

While we cannot expect governments to solve all our economic and social problems they do have an important part to play. We can expect them to remove roadblocks and to provide an environment where prosperity can flourish. We can ask government to:

- manage more efficiently,

- cut costs and reduce the deficits,

- eliminate overlap and duplication of programs within and among governments.

- improve our tax systems so that we don't continue to be disadvant ıged compared to our major trading partners.

- review regulations to ensure that they are assisting not burdening the economy,

- break down our interprovincial trade barriers to the movement of goods, services, capital and people that have us discriminating against ourselves at a time when foreign competitors have increased access to our domestic market. These barriers add $6.5 billion to our costs each year, and

- take a fresh look at how they operate and have the courage to streamline and innovate to facilitate a more entrepreneurial environment – both within government and across the country. To check its progress, the Action Plan recommends an independent review process.

What became clear to the Steering Group on Prosperity is that if we are to successfully compete, we must think smarter, act smarter. And to do that, Canada needs to inculcate in all Canadians the importance of lifelong learning. All of us know that we are living in rapidly changing times. The more comfortable we are with change, the more productive we will be. Our businesses must be quick to restructure, retool and retrain. To do this effectively requires not only that we be highly skilled in our jobs but that we also have skills of flexibility, adaptability, decision-making, creativity and communication skills that can be attained through education. In essence, education must be a top priority in society and in business.

If businesses adopt training cultures they not only improve their productivity but society's as a whole. If we look at countries where training is a priority, like Germany and Japan, we also find lower unemployment rates: Germany's is around 5%, Japan's is hovering above 2%, whereas Canada's is over 10%. In Japan and Sweden, workers receive an average 170 to 200 hours of formal on-the-job training annually. Canadian workers receive about 7 hours per year. Canadian employers are not investing enough in em-

ployee training. It is not only big business and industry that can benefit from training but all enterprises. Representatives of the Ontario Ministry of Education and Training are here today and they could cite you examples of small companies that were at risk of floundering but they up-graded their technology and trained their staff. The results are not only improved quality, increased productivity and a larger market share but also increased staff morale and job satisfaction.

No longer do Canadians hold one job, maybe a second, in a lifetime. Canadians now average six jobs. This fact alone should convince all of us to make learning and development of skills a lifelong activity.

What became clear to the Steering Group is that there is a correlation between education, in the broadest sense, and prosperity. Education is the foundation of success. We would like to see all Canadians commit to building a learning culture - beginning in the home and reinforced in all sectors of our society. The University of Michigan carried out a study that shows Indo-Chinese families adapt quickly to US schools because studying and learning are an integral part of home life. As educators we need to reach out to all parents so they better understand the importance of providing a home environment conducive to learning.

Many Canadians of course understand the importance of education and in fact are concerned that students are not getting the training they need to meet the demands of work and society. They want to move the emphasis from process to results. They want the focus on performance.

This questioning by Canadians of our educational systems brings to the fore the obvious but crucial question, "What do we want our learning systems to achieve?"

To make sure that question gets answered in a comprehensive way, the Action Plan recommends a Canadian Forum on Learning. The forum would bring together interested parties from across the country to define expectations, monitor implementation, encourage partnerships, and promote the importance of learning.

One expectation that was repeatedly proposed from a range of sources was to focus on results, to introduce competence-based education. This approach will require considerable creativity on the part of educators because all competencies cannot be assessed through standardized tests.

The approach will, however, make it easier to tailor learning to individual needs, allow learners to move at their own pace, provide employers with a clear indication of skills acquired by students, and make those qualifications portable across Canada.

In my own school board, Georges Vanier Secondary School began, in 1988, to introduce a skills-based approach to education. This program came together with the cooperation of business, industry, labour, post-secondary institutions as well as parents, students and staff. They identified four areas of competency to be achieved before graduation: problem-solving skills, communication skills, personal skills and application skills (computers, technology and telecommunications).

I sincerely believe that improving education and training is the most important gift we can give Canadians - our children and ourselves. We need to ensure that children come to school eager to learn and able to concentrate. This involves a range of environmental issues from parenting skills and nutrition to security and well-being of the child. Evidence is clear that an investment in infant nutrition and early childhood education pays huge dividends in the long term.

We need to develop more effective strategies to keep students in schools until graduation. The cost to our society is too high to do otherwise. Within our school systems, I see four prime areas of focus.

The first is to improve results in core subjects with particular emphasis on reading, writing, mathematics and sciences. Educators know that without mathematics and science, students close off almost 100 ca-

reers and without literacy they close off virtually all careers. Therefore it makes sense to emphasize these subjects. This does not mean however that we ignore other subjects like the arts. We have learned how important innovation is to success in the workplace. The arts, taught well, stimulate and nourish creativity.

The second area of focus is to develop links with the world of work including acquiring technological skills. Canadian schools have been criticized for focusing too narrowly on one kind of intelligence, one kind of student: those who will go on to postsecondary education. Building closer links with business and industry will allow other forms of intelligence and skill to flourish, and encourage students to consider careers in trades and technology at a time when the demand for skilled workers is increasing. Links with the business community improve the transition from school to work by developing some basic work skills in students. It can also show students in a dynamic way the application of math, science and technology.

A gap exists in Canada for the training of skilled workers. Educational institutions and business should come together to develop more training and apprenticeship programs. Alberta and Ontario have made a start with their two programs that allow senior high school students to continue with their schooling while training as registered apprentices.

The North York Board of Education has actively been building links with business and industry and now has partnerships, and an exchange of ideas, knowledge and resources, with more than 30 organizations such as Connaught Laboratories. While school boards could never afford to keep up with technology, they can, through partnerships with industry, expose students to technology's potential; and they can make students and staff computer literate. My school board has done extensive computer workshops for students and staff, tapped into global data banks, involved schools in electronic global networks, and published a teacher-planning document for computer integration in elementary schools called *Touching Tomorrow Today*.

The third educational focus is to develop life skills in a prejudice-free environment that empahsizes self-esteem, communication, interpersonal relationships, creativity, decision-making, and comfort with change. The development of solid life skills cannot be overstressed. I know many schools have been working hard to foster these skills. We need to ensure that they have the knowledge and resources to teach them effectively because without such skills, students will not only be disadvantaged in school but in life.

The fourth area of focus is the need to build a more inclusive educational system and a more inclusive society. Canada draws people from around the world yet many have been blocked from achieving their full potential because of gender, race or economic circumstances. A society that discriminates against individuals or groups pays a high price socially and economically.

People deliver prosperity. If segments of our society are cut off from exercising their potential, or from participating fully, we proportionally diminish our prosperity and our quality of life. Skills, talents, intelligence are neither gender nor colour specific.

Between 1990 and 1995, 311,000 young people will immigrate to Canada. Of that total, 73% (227,000) will be between the ages of five and 14. The remaining portion will be children under the age of five. Of all these children, 50% will locate and settle in Ontario. In North York schools, we are conscious of increasing globalization and the importance of our multicultural country. To prepare our students:

- we have developed student and teacher exchanges with other countries such as Japan, China and Jamaica;
- Asia Pacific and international language programs are in place at several of our secondary schools;
- an International Studies/Italian Program has been in place for years at Nelson A. Boylen Collegiate Institute; and
- the International Baccalaureate program, which is recognized by universities worldwide, is operating successfully at Victoria Park Secondary School.

The North York Board of Education takes very seriously its role in promoting equality and cultural and racial harmony for all Canadians. We value equality of the sexes; freedom from racial, ethnic or religious bias; and affirmative action employment policies aimed at having men, women and minorities proportionately represented in our system at all levels. Our practices reflect these values.

As a Board, we are recognized for:

- establishing the first Affirmative Action Department among Ontario school boards;
- instituting the first Race Relations Policy for a school board in Canada;
- setting up a Multicultural Services Department, the first and only one of its kind in Southern Ontario; and
- being the first school board in North America to have a female Assistant Director and Director of Education.

North York schools encourage the positive portrayal and acceptance of all Canadians through our long-established programs and policies. These include: Multicultural/Multiracial Student Leadership Camps, Academic Language Enrichment Programs, Heritage Education Programs, Educational Assessment, Translation Services and Reception Centres for Immigrants and Refugees, and Race Relations Conferences (CHIMO). Our policies and programs underscore our commitment to the appreciation of differences and the importance of building relationships based on respect.

The commitment is shared by the Steering Group on Prosperity. The Action Plan calls for building an inclusive society. This includes:

- giving all Canadians the chance to participate fully in the work force by strengthening efforts to hire and promote from under-represented groups;
- introducing measures to facilitate productive relationships among workers of different backgrounds; and
- finding innovative ways to make the structure and organization of work more flexible and better able to accommodate family and other social pressures.

Prosperity then, requires the active, full, and equal participation of all Canadians. To be successful, each of us has to meet the challenge of moving the country forward. Whether we are in education, government, or business, it is our job to give value for money, to be accountable, to produce results. We have to be prepared and comfortable with change. We have to be quick to innovate, quick to benefit from technology. We have to continually build partnerships and respect for one another. We have to continually learn and upgrade our skills if the world is not to pass us by.

As an educator, I believe it takes an entire community to fully educate a child. Likewise, it takes the collaboration of an entire country to create a strong economy; the collaboration of an entire country to build a quality of life that is the envy of the world.

The Workplace Challenge: Learning a Living

Douglas A. Stephens
Kodak Canada Inc.

I am honoured and pleased to participate in this conference on a subject that is of vital importance to my organization and to individual Canadians. As one of the people on the roster of speakers to represent the industrial community, I am pleased to share with you a business perspective on education in Canada. A strong Canadian educational process is fundamental to equipping Canadians in order to compete effectively in the global marketplace.

Canadians are becoming aware that traditional resource-based competitive advantages are eroding and can no longer ensure our economic success given the new realities of world markets. Canada's competitiveness, as measured in the *World Competitiveness Report* produced annually by the EMF Foundation, a Swiss-based academic consortium, has fallen rapidly in the last four years. In 1989, Canada ranked fourth; in 1990 we moved to fifth place; we maintained that position in 1991; but last year slid into eleventh place when compared to the rest of the 23 members of the Organization for Economic Cooperation and Development (OECD).

Our ability as a country to sustain our standard of living is threatened. We face economic adversity unlike anything in our history. Unless we change the way we do business, we are simply not going to be able to generate the wealth needed to support our current standard of living, let alone improve it. In 1939, Canada and Argentina had the same standard of living? Not many of us would like to return to that status!

Much has been said about entitlements and what governments should be doing for us; too little is said about what we should be doing for ourselves. The challenge of improving competitiveness falls squarely on the shoulders of Canadian businesses and individual Canadians. The private sector must take the lead role in initiating competitiveness and capitalizing on targets of opportunity.

A strong Canadian educational system that provides a world-class learning experience for all participants is paramount if Canada is to succeed in competing effectively now and in the future. It makes the quality of our education among the most important strategic weapons to improve the capability of each Canadian and, therefore, Canada's overall competitiveness. Our capacity to acquire and apply knowledge must become one of the most significant advantages that we, as Canadians, possess. The skills, knowledge, and attitude that we demonstrate will count the most as we compete for business with the rest of the world. This human capability factor will be the key determinant of success or failure. In truth, the only sustainable competitive advantage that Canada has is the capability of every Canadian to acquire and practise cutting-edge skills.

Lifelong learning to the highest standards will reward Canadians with lifelong employability. We shall be learning a living. Employment is the engine that drives our standard of living. To phrase this in a slightly different way, lifelong learning leads to lifelong employment and thus to a world-class lifestyle.

In a global marketplace, the transfer of technology and capital are for the most part borderless and rapid; therefore, the location of plant expansions, new product development, and virtually

all innovations will depend on the availability of skilled employees. Existing businesses will not succeed simply by making heavy capital outlays on new equipment and manufacturing facilities embodying leading-edge technology. That is just not good enough. Instead, business must look to individuals to become fully aware of the relevance of education to their future prosperity and that of the organizations that employ them.

Education has a profound effect on the lives of Canadians in terms of the kind of jobs we can aspire to, our income, and the quality of life we enjoy. Canada faces a threat similar to that of our neighbour to the south: High skills or low wages. In a 1990 report called *America's Choice: High Skills or Low Wages!*, produced by The Commission on the Skills of the American Workforce, it states:

> *We cannot remain a high wage, low skill nation. Either America will do whatever is necessary to create high performance work organizations and the high skills needed to sustain them, or the country will continue to slide toward low skills and low pay that goes with them.*

One of the concerns expressed in a recent magazine article by Beverly Geber (*Training*, January 1993) was that the US might be a nation of shoe clerks, since the service sector would be the location of much of the new jobs created in the US. This could also be said for Canada. In a 1991 study by Professors Rugman and D'Cruz of the University of Toronto commissioned by Kodak Canada Inc., it was stated that 70% of all Canadians were employed in the service sector. One cannot lose sight of the importance of the manufacturing sector as an important provider of high-wage jobs and as a major source of product demand for other sectors. We must, therefore, urgently address declining employment in Canadian manufacturing.

Lester Thurow, the Dean of the Sloan Management School at the Massachusetts Institute of Technology, said:

> *The only way Americans and Canadians can maintain their high wages is to improve the education and skills of the bottom half of the workforce, which now lacks the skills needed to command higher wages. If we don't have skills better than the Mexicans, that's not the Mexicans' fault; it's our fault.*

Skill Requirements

A recent report by MaryAnn McLaughlin for The Conference Board of Canada states that the critical skills, qualities, and competencies indicated by business as being essential are those already reasonably congruent with the current goals of education systems.

The three key skill areas are academic, personal management, and teamwork. Under academic skills are the traditional three R's augmented by speaking, listening, thinking critically, researching ability, and learning for life. Included under personal management skills are attitudes and behaviours (such as self-esteem, confidence, honesty, initiative and energy), responsibility (setting goals and priorities, managing time, and accountability), and adaptability (creativity, respect for diversity and embracing change). Teamwork skills involve being a contributing team member while respecting the thoughts and opinions of others.

Let us look at Kodak Canada. We were established as a Canadian company in 1899. George Eastman, the founder, had a vision of not only selling products in Canada but also of manufacturing products for the Canadian marketplace. This has been our tradition and our heritage. Although the company mission continues to this day, the challenges we face have increased significantly since 1899. Today, more than 2,000 Canadians are employed by Kodak Canada who make, sell, and service a variety of products to meet the needs of our customers. These products range from films and cameras to sophisticated digital imaging systems for the office, printing and publishing, and health care.

We are also significant exporters in Canada as Kodak Canada has the Eastman Kodak world mandate to manufacture microfilm which we ship to other parts of the globe in order to meet the exacting demands of Kodak's worldwide customers. The Canadian involvement literally stretches from "sea to sea" as we have sales and service locations in all major Canadian cities.

Our company is a high-tech organization considering the products we offer and the technologies we employ to manufacture, service, and distribute them.

Kodak Canada has taken an innovative approach in addressing the continuing challenge of developing our most important resource - our people.

From a human resources standpoint, what does it take to run our company? The following table indicates the educational levels attained by Kodak personnel:

Category	Percent
Less than high school diploma	13.3
High school diploma (grade 12)	39.7
Ontario secondary school diploma (grade 13)	9.0
Community college diploma	14.0
Formal designations*	3.9
Bachelor degree	17.1
Masters degree	2.6
Doctoral degree	0.2
Total	100.0

* These designations would include various professional accreditations such as the Canadian Management Accountants, Canadian Institute of Traffic and Transportation, Member of Credit Institute, etc.

As one can see from this table, over 86% of Kodak's current staff have a minimum of a high school diploma. Its employees' high level of education is one of the key reasons Kodak has continued to excel in a very competitive atmosphere, both within the Eastman Kodak's global enterprise and the world at large.

Our people have a learning mindset which takes them beyond the formal learning environment and helps them adapt to technological change. Part of the solution to acquiring an intelligent workforce is in recruitment; Kodak Canada has been able to hire a workforce that is probably above average in its educational background; the other critical part is in the ongoing development of these individuals.

We have adopted as our key process the "Learning for Impact" model. Our approach has been influenced by the book, *Training for Impact*, by Jim and Dana Robinson (1989). We have purposely altered the title of our model because of the negative connotations about Training. As Malcolm Knowles said, "Training is for dogs and porpoises. Learning is for people." He also went on to describe learning as "a process of active enquiry".

Kodak Canada had a Training Department for many years before I joined the company in 1967. The decision was made just prior to my arrival in the department, in 1988, to discontinue any further delivery of programs by Kodak personnel. This has been adhered to with only a few exceptions. We will undertake the delivery of programs when we are the experts or it pertains to our business and it is important to add a "Kodak" flavour to the content. One example would be the delivery of some of the Manufacturing Resources Planning (MRP II) programs where it is important to give Kodak examples and applications.

Our decision to abandon internal delivery was based on a number of factors. First, the employees' managers needed to own responsibility for developing their staff's capabilities. Many managers felt that they could pass on the task of development to the Training Department and then return to their real job of selling, reducing costs, and administering of their area. Second, the courses being taught were not targeted or positioned appropriately for the participants. Frequently, the trainer did not have detailed knowledge of the subject and this was apparent to the participants. The measures of record indicated how much activity had occurred, rather than what was now being accomplished by the participants that they could not do prior to training. This approach led to a "Training for Activity" trap we had to escape.

The model that Kodak Canada adopted emphasized consultation; we reorganized and renamed the department, Education and Development. We also attempted to pattern our consulting after the approach advocated by Peter Block (1981) in his book, *Flawless Consulting*. This operating style emphasized development of partnership with the various line managers so our consultant will be viewed as a collaborator and

not as an "expert" or "a pair of hands".

Our major focus is to ensure that there is a business result that drives every learning experience we are supporting. The role the line managers play in this situation is absolutely critical for the learning experience to be successful. Managers must agree to the employee's need for the development, which in turn must be congruent with the managers' business plans and be financed from their departments' budgets. Our Education and Development consultant contracts for the manager's involvement and commitment by identifying the employee(s) performance deficiency and ensuring that it is something that can be addressed through a learning experience. We attempt to have managers understand that they have important roles to play in the process.

Once the learning experience has taken place, managers must provide opportunities for employees to use their newly acquired skills and to reinforce employee'e work when the new skills or behaviors are demonstrated. Our consultants coach the managers to make sure that these various elements are addressed in order to achieve the maximum result for funds spent on learning experiences.

At the high school level, Kodak Canada and the City of York's Board of Education are in the third year of a venture whereby our employees are being taught at their worksite. Through this partnership we have had approximately 50 students participate in the classes being offered. The results to date have been very positive.

Last year, we had our first students complete their Grade 12 credits and receive their secondary school diplomas. These graduates have had an impact on their fellow workers. This fall we had several employees inform us that they wanted to enrol in the program with the goal of completing their high school education. We had one foreman enrol - we felt he was a great role model for the people he works with. Our goal would be to eliminate that category of employees who do not have their secondary school diploma (Grade 12).

This program has been for volunteers who come forward to enrol in these high school courses. The company's position is to encourage and support employees in upgrading their academic qualifications by paying them for half of the time that they are in the classroom. In this way, the employees contribute some of their time, allowing them to build ownership of the program, and to take pride in their progress. We have also had a number of employees enrol in English-as-a-second language programs. These students tend to be recent immigrants to Canada who are already fluent in at least one other language or francophones who need to improve their written English skills.

Our key thrust is the development of skills for our workforce. This approach has taken a number of variations. One example resulted from an analysis of our workforce requirements in the maintenance area. Several years ago, it became clear that a multi-skilled approach to servicing our plant's equipment would be required. At the same time, we found some trades (e.g., painting and pipe insulating) were no longer needed. The incumbents in these positions were offered, at the company's expense, the opportunity to return to school to learn new skills. An arrangement was made with Humber College which proved to be mutually satisfying: Humber College provided the instructors and assisted in the development of the material and Kodak Canada provided a mentoring program at the job site. The Automatic Equipment Mechanics Program proved to be such a success that we initiated another program of a similar nature which started in the fall of 1991.

Another variation involved a project that included six people from a variety of jobs throughout our organization and taught them to be Information System Analysts. About three years ago Kodak Canada, like many other companies, was having a great deal of difficulty attracting and keeping information systems personnel at the professional level. We advertised internally for people wanting to make a career change into this field; a large number of people responded. With assistance from Humber College, we tested, interviewed, and selected the six candidates. The actual instruction was delivered by staff at Humber College. All six individuals were successful in their studies, completed the program, and moved into a professional job stream. Both of these programs have been of benefit both to the company and to the individuals involved.

There have been a number of programs that we have contracted out to various university faculties. A deficiency in skills became evident to both the manager and the sales people in one of our business units. As our customers' needs changed, they demanded less "technical information" (which has traditionally been one of our strong suits) and more information to how buying and using our products would impact their bottom line; in response we developed a program in conjunction with the Faculty of Administrative Studies at York University. This program focused on the understanding of the entrepreneurial approach to business and corporate finance. As a result, our sales representatives returned to their sales territories with a far better understanding of their customers' approach to managing their businesses and a much better grasp of the use of financial information as a selling tool.

Kodak Canada has sent a number of our senior people on advanced programs offered by some universities for "executive development". These programs have varied from Marketing to Manufacturing Operation to Executive Development.

The company's tuition aid program is another example of support for education; approximately 100 Kodak Canada people are involved in continuing to improve their education. We grant full tuition reimbursement along with 50% funding for prescribed textbook costs for all approved courses. People have used this method to complete diploma and certification programs and to attain undergraduate and postgraduate degrees.

I emphasize that my concerns have been expressed from the vantage point of a Canadian businessman working for a major manufacturing company in Canada. As a Canadian with a reasonable amount of national pride, I am concerned about our ability to compete for jobs in the global marketplace when new entrants often come into organizations with a severe deficiency of skills. A 1989 Statistics Canada survey showed that over 28% of our young people aged 16 to 24 years who were born in Canada were functionally illiterate and over 40% were innumerate. Many of these people were the very students who had recently graduated from our schools! Our high school dropout rate is approximately 30%. In Japan 95% of the students graduate from high school and in South Korea 98% do so.

Data for international achievement in science and mathematics show Canada performing at best in the middle of the pack when compared to other OECD countries. Our enrolment in engineering, mathematics, and sciences has been declining since the mid-'80s. Mexico is graduating more engineers per capita than Canada. A recent study (1992) by the Canadian Engineering Human Resources Board and Employment and Immigration Canada of the supply and demand for engineers in Canada through the 1990s indicated that by the year 2002 we would have a shortfall of 19,000 engineers.

Another concern is the current mindset around skilled trades. These are not dirty jobs that only dropouts can undertake. Canada already is falling short of having enough skilled tradespeople to meet the demand. The traditional answer was to recruit people from Europe and the United Kingdom. This is no longer possible. In 1988, Canada, for the first time in this century, had a negative immigration situation with Italy. More people emigrated to Italy from Canada than immigrated to Canada from Italy! Parents and students need to realize that the skilled trades offer a tremendous employment opportunity.

It was reported in *The Financial Post* in September 1992 that there were 1.5 million unemployed Canadians. The staggering statistic that followed really surprised me. There were 1.5 million jobs going unfilled in Canada because people did not have the required skills. Many of these jobs were in the skilled trades. One only has to require the services of a plumber or an electrician to realize that there are very good wages to be had in these occupations. Looking under the hood of a car gives some of us, even those with a technical bent, the shivers as we contemplate the sophisticated electronic components that are now involved in the automotive industry.

What we need in Canada are more initiatives promoting the joint efforts between high schools and apprenticeship programs. One more example: in Germany the average age is 17 for an apprentice entering a trade while in Canada it is 28. For many young people this 11 year gap is

taken up with a series of low paying, service-sector jobs such as working in fast food outlets trying to eke out an existence before realizing the benefits of a trade and enrolling in an apprenticeship program. What a waste of time this is! Eleven productive years in a trade have been lost - a frustration to the individual and a lack of productivity for our nation.

If Canada is going to achieve significant improvements in the international arena these situations will have to be addressed. If the future for Canada depends on developing highly skilled people in order to earn a high standard of living, then several stakeholders (parents, educators, business people, and government officials) will be required to make contributions for the future well-being of Canada.

Given the already high cost of education investing more money in educational systems is not the answer. We are already spending more on elementary and secondary education than most other countries in the world. Our taxes continue to rise at a rate considerably greater than that of inflation. Canada needs a radical rethinking of its educational systems. Alternatives are needed that will deliver the high quality required to make and keep us a competitive nation.

One of my major concerns is the political situation that surrounds our educational systems in Canada. As Canadians proved last fall in the referendum on the Charlottetown Accord, it is extremely difficult to reach a consensus on many aspects of our political structure. Without a clear and inspiring vision for a national educational policy for Canadians, I fear that we shall still be talking about these issues well into the next century. The world, unfortunately, will not wait for us.

We need cooperation between all levels of government. If Canada is going to have standards for education, then let us develop a set that can be applied throughout the country. The wrangling between various levels of administration, be it federal to provincial or provincial to school board, needs to cease. If there ever was a time for Canadians to come together on an issue, this is it. Everyone should have an interest in this subject. It is fundamental to the health and wealth of our nation.

The 21st century does not belong to Canadians but to the wise. In order to sustain even our current standard of living Canadians will have to learn like never before. It will be imperative for all of us to learn our living through education and the lifelong pursuit of knowledge.

As John Houseman used to say in television commercials, we obtain our money the old fashioned way: we earn it! Canadians need to put a new spin on those words - we get our standard of living the old fashioned way: we learn it!

References

Block, P. (1981) *Flawless Consulting: A Guide to Getting Your Expertise Used*. Austin, TX: Learning Concepts.

EMF Foundation (Annual) *World Competitivenss Report*. Cologny/Geneva, Switzerland: EMF Foundation.

Commission on the Skills of the American Workforce (1990) *America's Choice: High Skills or Low Wages!* Rochester, NY: The National Center on Education and the Economy.

Robinson, J. & Robinson, D. (1989) *Training for Impact*. San Francisco: Jossey-Bass Publishers.

Rugman, A. M. & D'Cruz, J. R. (1991) *Fast Forward: Improving Canada's International Competitiveness*. Toronto: Kodak Canada Inc.

Pathways to Science: Career Transitions for Adolescents

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Introduction

The movement of young people from school into the labour market has become a major focus of attention over the past decade, primarily due to the pervasive economic and occupational restructuring taking place in Canada. Global economic conditions have focused particular attention on the question of Canada's competitiveness and the labour force that is deemed necessary to maintain and enhance its position. While this restructuring has impacted on the employment opportunities of all young people (Roberts & Parsell, 1989), particular attention has been directed to the subgroup of youth who might pursue science/technology careers. Both the Natural Sciences and Engineering Research Council of Canada (NSERC, 1989) and the Congress of the United States Office for Technology Assessment (OTA, 1988) have recently addressed the need to increase the numbers of young people who decide to pursue career pathways in science and engineering.

In its major policy study, the Office for Technology Assessment used a petrochemical processing analogy to examine what was known at that time about choosing a science career (OTA, 1988). The formal educational system was characterized as a "pipeline" through which "crude" talent is refined into various "finished" products that are taken up by the science and engineering labour market. While the analogy may offend some, it reinforces the fact that considerable interdependence exists between the activity of the formal educational system and the labour market. As Gaskell (1993) has pointed out, interest in the transition from school to work fluctuates greatly with changes in the economy.

The current literature confirms that a successful transition from school to work is of particular concern to young people (cf., Hogan & Astone, 1986; Lewko & Tilleczek, 1993; Lowe & Krahn, 1991; Poole, 1989) and that access to primary employment is the decisive factor in propelling adolescents into adulthood. While research on career choice and occupational attainment can be traced back nearly 100 years (cf., Sonnenfeld & Kotter, 1982), only limited attention has been directed toward the particular case of science career pathways. Given the fragmented state of the research, we compiled a number of points from the literature that reflect our best understanding of the area.

- It is generally acknowledged that the formal educational system is the main channel for entry to science careers.
- The elementary school period is critical for the development of interest in science and hence for recruitment into science experiences.
- Cognitive-developmental changes in middle childhood correspond to emerging interest in science.
- Teachers are powerful role models and sources of social reinforcement towards interest in science, particularly in the elementary years.
- The transition to high school presents youth with a new array of choices and experiences that compete with interest in science.

- The high school years add *some* new adolescents to the potential science talent pool.
- Career choices are being continually reshaped, with many high school seniors being more clear as to choice of an educational pathway than a particular career pathway.
- Even when a science educational pathway is chosen, it is not necessarily a "quantitative" science pathway.
- For science educational pathway students, seepage from "quantitative" to "non-quantitative" science and from science to non-science pathways escalates over the course of postsecondary education.
- Family factors, including intactness and parental inputs, play a considerable role in shaping the decision to pursue a science career.
- The stereotypic, often negative images of science and scientists that are held by the general population (including youth), undermine the science career choice.
- Different forces are involved in shaping female and male interest in and decision to pursue a science educational/career pathway.
- There is a strong gender bias in science, with males concentrated in the quantitative sciences and females concentrated in the non-quantitative sciences.
- Many science-interested youth have mixed occupational aspirations that include non-science choices, creating a competition for career choice.
- Transition from high school to postsecondary education is the single largest source of see page out of science.
- In postsecondary education, females (often the most able) seep out of science more than do males.

Sources of the Current Findings

The findings that are the basis of the current paper have emerged from our interdisciplinary research group at Laurentian University in Sudbury, Ontario that has been examining the school to work transition process. In addition to the authors, members of the group include Dr. Rashmi Garg, Department of Psychology, Dr. David Pearson, Department of Geology and Mr. Alan Nursall, Director of Science North. Science-oriented youth are one of four sub-groups that we have been investigating, the others being drop-outs, youth in care, and native youth. Our focus on science-oriented youth was stimulated by a policy decision of the Ontario government to support a residential summer program for high-performing science students from Northeastern Ontario. Located on the Laurentian campus, the Northern Summer School for Excellence in Science (NSSES) was seen as a strategy to promote the development of highly skilled human resources in Northern Ontario and to stimulate these young people to consider returning to or staying to work in Northern Ontario on the completion of their postsecondary education. Our research program has recently expanded as a result of a partnership that has evolved between the Youth Science Foundation of Ottawa, Science North in Sudbury and the Centre for Research in Human Development at Laurentian University.

This paper is designed to provide a broad picture of some issues related to the transition of adolescents into science career pathways. In order to do so, it was necessary to bring together findings from four separate studies that our research group has been involved with. Some of the findings may appear redundant; however we felt it important to underscore some of the points regarding both initial entry to science educational and career pathways and persistence in these pathways.

The first data set involved a telephone/mail survey of 466 (86%) of the students who had attended the Northern Summer School for Excellence in Science between 1987 and 1990. Students who attended the NSSES were typically in their senior years of high school with at least one term remaining prior to graduation.

The second data set involved 176 students who attended the NSSES during the summer of 1990 (Lewko, Hein, Garg & Tesson, 1993). The students responded to a structured questionnaire that was administered in small groups in July at the beginning of the program.

The third data set involved a survey of 363 (95%) of the participants who attended the 1992 Canada-Wide Science Fair in May 1992.

The fourth was a sub-set of data from the panel study that has been following young Canadians from three cities (Edmonton, Toronto, Sudbury) as they left secondary school or university in the spring of 1985. The current sub-sample of 233 science students was obtained from the 836 individuals who had remained in the study at Year 4 (June, 1989) of the study.

Occupational aspirations were used to define science career pathways. The typical approach is to identify career directions in relatively absolute terms, i.e., science vs. non-science, thereby ignoring the potential *variability within* a "science" pathway. In our work, we have divided science into two categories based on a synthesis of various classification systems, including the Standard Occupational Classification of Statistics Canada.

Quantitative Science includes physical science, life sciences, architecture and engineering, mathematics, statistics and systems analysis and computing. Non-Quantitative Science includes health diagnosing and treating occupations, nursing, therapy and related assisting occupations and other occupations in medicine and health such as pharmacist and optician. Non-science, which captures the remaining occupational aspirations, includes managerial and business, teaching, artistic and literary, sales, service, construction, farming, and social science careers.

While the classification system is consistent with similar systems in the US, there is some debate in the literature regarding the placement of social sciences within the science/non-science division. Research by Hilton and Lee (1988) has indicated that social science students differ from "hard" science students on their reasons for selecting majors and their persistence in these majors such that including social sciences would confound our understanding of the "science" category.

When Youth Become Interested

Figure 1 (see page 26) provides a percentage breakdown of when the 1990 NSSES students reportedly first became interested in science. Two points are worth noting. First, the elementary school years are very important for the development of interest. Second, there is only limited interest development during the secondary school years. As Figure 1 shows, only 18% of the science youth reported developing their interest in science between grades 10 and 12.

Analysis of open-ended descriptions of how the students became interested revealed that encouragement from others was a key source of influence (66%), with teachers, family members and friends being identified. Three other influences included: experiencing science as an interesting subject at school; performing well in science as a school subject and being involved in science fair experiments. These latter three influences reflect a supportive organizational climate.

The importance of the early years in shaping a strong interest in science is confirmed by data from the Canada-Wide Science Fair participants. Virtually all reported becoming interested in science quite early in their development. By Grade 3, 40% had become highly interested, with the number increasing to 77% by Grade 6 and to 90% by Grade 8.

The data from the 1990 NSSES and the CWSF samples establish quite clearly that interest and motivation in science starts early and it is very high going in to secondary school. Consequently, the secondary school system is faced with the need to retain youth in science as much as, or perhaps more than, they are with recruiting new youth into science.

Pursuit of Science Educational Pathways

A main indicator of pursuit of a science career is reflected in the educational pathways that are selected in post econdary school. The high level of interest in science that is carried into

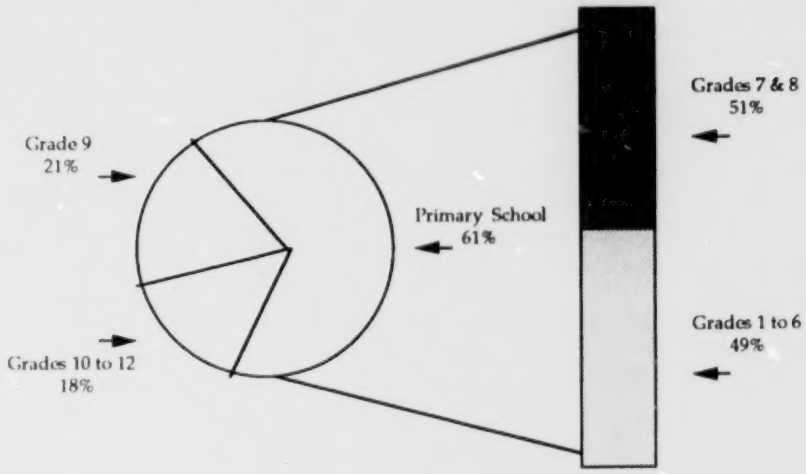

Figure 1. Grade Level for Development of Interest in Science
(Source: NSSES 1990)

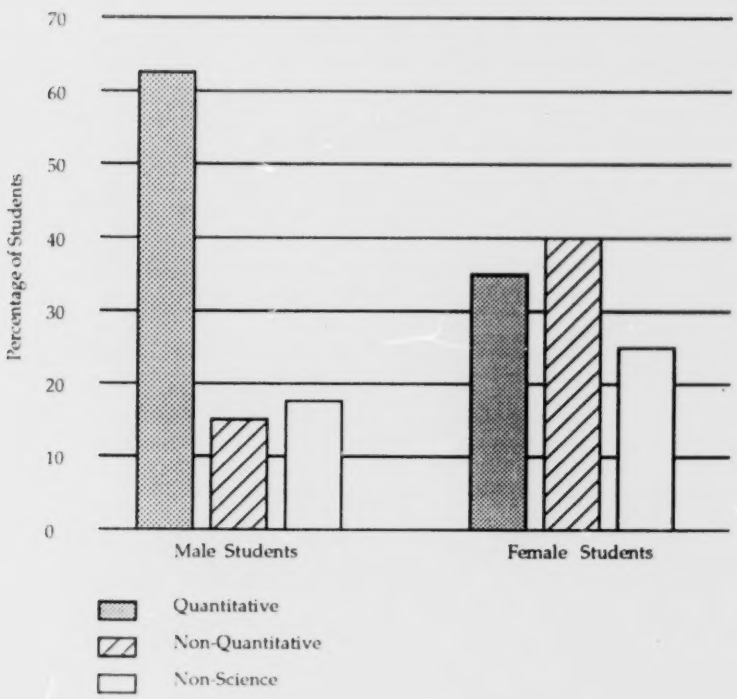

Figure 2. Educational Pathway Choice by Gender
(Source: Northern Summer School for Excellence in Science)

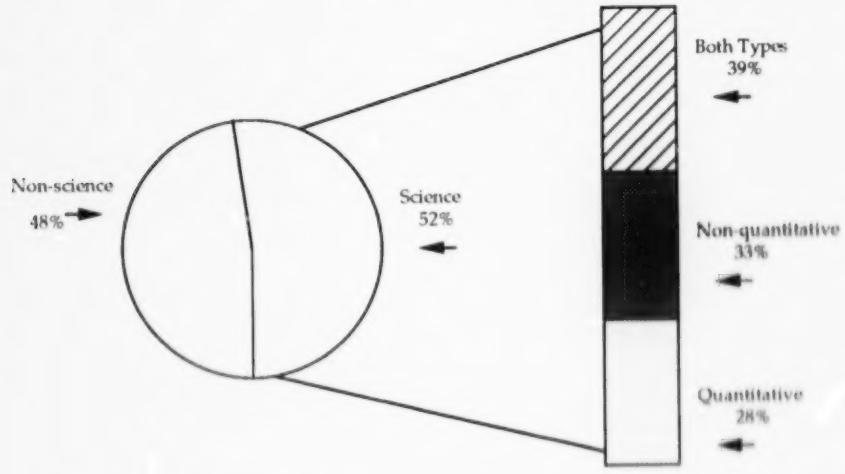

Figure 3. Career Pathways of CWSF Participants: Science

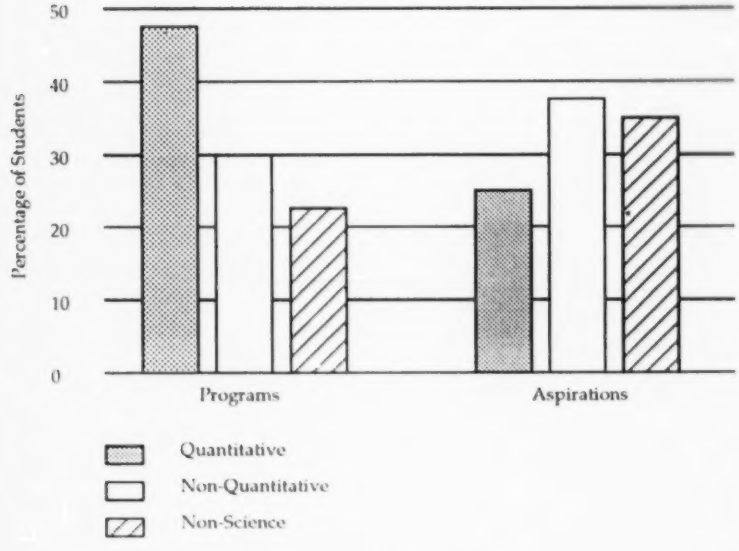

Figure 4. Comparison of Post-secondary Educational Pathways and Occupational Aspirations
(Source: Northern Summer School for Excellence in Science)

and through secondary school should translate into choice of a postsecondary program that is science oriented in general.

The 4-year NSSES study provided data on choice of educational pathway. The data reveals that a majority (78%) of these science-oriented adolescents entered a science educational pathway, with most (62%) pursuing educational experiences in the Quantitative Sciences. This figure is somewhat misleading, however, since it combines both males and females. Figure 2 clarifies the gender distribution. Not surprisingly, it reflects what is becoming well known - that the Canadian labour market is highly gender segregated. Males orient more towards Quantitative Sciences educational pathways than do females.

The Canada-Wide Science Fair participants provide a slightly different picture regarding entry to science careers. Figure 3 reveals that a smaller percentage of this group intend to enter science careers than was reported by the NSSES subjects. Recall that 78% of the NSSES subjects intended to pursue a career in science, while the corresponding figure for the CWSF group is 52%. The figure also reveals greater variability in type of science to be pursued, particularly with respect to the quantitative area.

Examination of the 48% of CWSF participants who were interested in non-science career options revealed two points of particular interest. First, only a small proportion (approximately one-fifth) are definite about not being interested in a science career. Second, a much larger number are in a state of uncertainty regarding their career trajectory. They reflect career interests that include both Non-science and Quantitative or Non-Quantitative options.

Based on the NSSES data, it would appear that youth who have been identified as highly motivated to pursue science do indeed continue on in educational pathways that will lead to science careers. The CWSF data qualifies this observation and reveals that a large number of science-oriented youth have mixed career aspirations that could actually take them out of the science labour market.

The CWSF data also reinforced the gender dilemma. As with the NSSES subjects, the Canadian sample reflected stereotypic career leanings, with males more oriented towards the Quantitative Sciences and the females oriented towards the Non-Quantitative sciences.

Science Careers Aspirations

Not surprisingly, a majority of science-oriented youth aspire to high socio-economic positions. Virtually all (90%) of the CWSF participants expected to attain a high status career. Furthermore, a majority saw their success lying within higher education, with 62% expecting to complete a Ph.D. and an additional 19% intending to complete a Master's degree. The strong commitment to post-graduate education underscores the importance of attending to strategies that will ensure the retention of youth.

Table 1. Participants' Occupational Aspirations

Cat.	Occupational Titles	No.	Percent.
1	Physician/Surgeon, Dentist Pharmacist, Veterinarian	70	23
2	Architect, Engineer, Geologist	46	15
3	Elementary, Secondary School Teacher	14	5
4	Social Sciences or Administration/Management	28	9
5	Other occupations in medicine & health (Audiologist, Physiologist, Optometrist, Dietician, etc.)	25	8
6	Mathematician, Physicist, Systems Analyst	25	8
7	Biologist & Chemist	31	10
8	"Something related to science"	24	8
9	Other occupations (Sales, Secretary, Bookkeeper, Photographer, etc.)	44	14

Source: Canada-Wide Science Fair, 1992

Table 1 provides a breakdown of the types of occupations to which the CWSF respondents aspired. It is evident that the category of occupations chosen by the largest number of participants was the status health professions - physician, dentist, etc. Clearly there is competition for the career commitment of science-oriented youth that could readily swing them towards a career pathway other than science.

The potential impact of competition is reflected in Figure 4 (see page 27) which compares

the percentages of NSSES students choosing to pursue post-secondary studies in Quantitative, Non-Quantitative and Non-science with the percentages of students having occupational aspirations in the three areas. As can be seen, only about half as many students were aspiring to careers in the Quantitative sciences as had chosen programs of study in the area. Conversely, a much larger percentage of students had career goals in the Non-quantitative science occupations than the percentage pursuing similar educational pathways. These differences between educational pathways and occupational pathways reflect the fact that occupational choices are more tentative than educational decisions. Such differences argue for caution in overestimating success of science recruitment approaches. Clearly pursuit of science does not translate into persistence in science, particularly with Quantitative career pathways.

Persistence in Science Career Pathways

The 3-Cities Study of high school graduates in Edmonton, Toronto and Sudbury provides some additional insight into the pursuit and persistence dilemma. Analysis of the data revealed that of the initial 233 students who pursued science educational pathways, only 39% persisted. This group of 91 students were almost equally divided on the basis of gender (55% male; 45% female), with no significant relationship between gender and persistence. The seepage out of science occurred almost equally across the Quantitative and Non-Quantitative areas.

Orientation to Science Careers

We are only beginning to understand the range of influences that shape a young person's interest and involvement in science. Data from the CWSF participants provided us with some of this insight. We asked the science fair participants to tell us how they became interested in science and to indicate the people, things or events that influenced them in this respect.

Table 2. Development of CWSF Participants' Interest in Science

Source of Interest	% of CWSF Participants		
	Total	Males	Females
Found science interesting & challenging	27	32	21
Influence of family & friends	19	21	17
Participation in a science fair	16	12	20
Teachers	12	10	15
School	11	7	14
Other (10 categories)	15	18	13

Table 2 summarizes these responses; first for the group as a whole and then for males and females. While not surprising, these data identify three contexts - the school, including teachers, close personal relationships in the form of family and friends, and extra-curricular activities as stimulating interest. From a gender perspective, males appear to be more intrinsically oriented towards sciences, while females are influenced by several sources. This multiple sourcing may be a key factor in increasing the involvement of

Table 3. Parental Influence and Encouragment: NSSES 1990 and CWSF Participants

	Percentage of Negative Responses		Percentage of Positive Responses	
	NSSES	CWSF	NSSES	CWSF
Mother encourages me to do well in math	8	7	79	81
Mother encourages me to do well in science	7	6	81	83
Father encourages me to do well in math	11	7	76	81
Father encourages me to do well in science	11	5	75	82
Mother knows a lot about science	50	33	17	36
Mother is good at math	34	24	29	52
Father knows a lot about science	33	17	42	62
Father is good at math	26	9	55	74

females in science activities in general and science careers in particular.

Family is clearly an important influence regarding science. Across all samples reported here, family intactness was very high, typically exceeding 80%. The educational and occupational attainments of mothers and fathers were also very high. The parents of science students in our studies tended to be more highly educated than the general employed population. Fewer of the mothers and fathers were in the lowest educational category and more had attained university degrees than the general labour force, particularly the fathers. For examples, 65% of the fathers and 52% of the mothers of the CWSF sample were university graduates.

The manner in which parents influence the science orientation of their adolescents is perhaps best reflected in Table 3. Parents of science students are very supportive and encouraging. More than 75% of the sample viewed both parents as providing strong encouragement to do well in science and mathematics. This encouragement was recognized despite the fact that most students did not view either parent as being very knowledgeable about science or good at mathematics. Knowledge or expertise in science or mathematics was not necessary in order to provide a strong support network.

The final figure provides data on parenting styles reported in families of the CWSF participants. Research has demonstrated the importance of family interaction patterns for adolescent outcomes and behaviours such as school performance (Dornbush, Ritter, Leiderman, Roberts & Fraliegh, 1987; Steinberg, Lamborn, Dornbasch & Darling, 1992). There is clear evidence that an authoritative parenting style (i.e., parental responsiveness, encouragement and open communication; establishment and firm enforcement of rules and standards) is generally facilitative in adolescent development. According to Baumrind (1991) the balance between parental 'demandingness' and responsiveness is the critical aspect of parenting style that determines adolescent functioning in various social contexts.

As Figure 5 demonstrates, nearly one-half of the adolescents in this group of high achieving science students had come from authoritative families and a further 46% came from a combined authoritative parenting style. The virtual absence

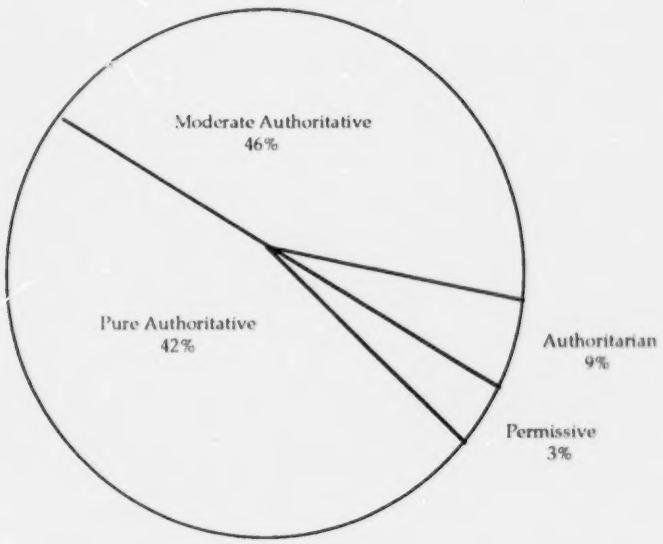

Figure 5. Percentage of Students from Families with Various Parenting Styles
(Source: Canada Wide Science Fair 1992)

of youth from permissive families further indicates the importance of control and firm guidance in achieving excellence, at least in science education. Our analyses of these data have also shown that parental encouragement for science achievement was significantly higher for females in the authoritative parenting group (Hein & Lewko, in press).

End of Journey

And so we have come to the end of our story line. We have conveyed a relatively large volume of information in a brief report. We have, therefore, selected a number of observations that we believe should be underscored if our debate regarding the entry of youth into science careers is to advance in any meaningful way.

- Interest and motivation in science begins early and is carried into the secondary school system, providing teachers with a unique opportunity to reinforce the pursuit of science.

- The fact that students are pursuing science educational pathways does not ensure that they will persist into science career pathways; other initiatives must be considered by school and family to sustain this activity.

- The fact that students pursue science educational pathways and continue into postsecondary science does not ensure that they will pursue quantitative science pathways.

- Pursuit of science is highly gender-related among our high science-achieving youth. Efforts to change this situation must include the deliberate use of support networks, including family, school and peers.

- Science-achieving youth hold very high educational and occupational aspirations, providing a key opportunity for postsecondary institutions to facilitate pursuit of quantitative areas and persistence in all science areas.

- Current science-achieving students come from highly advantaged family support systems. In order to expand the student base in science it will be necessary to explore mechanisms whereby family, school and extra-curricular organizations work cooperatively in promoting science-related activities and in supporting educational and occupational decisions leading to science careers.

References

Baumrind, D. (1991) Parenting styles and adolescent development. In J. Brooks-Gunn, R. Lerner & A. C. Petersen (Eds.). *Encyclopedia of Adolescence* (pp. 746-758). New York: Garland.

Dornbusch, S. M., Ritter, P. L., Leiderman, H. P., Robert, D. F., & Fraleigh, M. J. (1987) The relation of parenting style to adolescent school performance. *Child Development*, 58, 1244-1257.

Gaskell, J. (1993) Introduction to transitions: Schooling and employment in Canada. In P. Anisef and P. Axelrod (Eds.), *Transitions: Schooling and Employment in Canada*. Toronto: Thompson Educational Publishing.

Hein, C. & Lewko, J. H. (In press) Gender differences in factors related to parenting style: A study of high performing science students. *Journal of Adolescent Research*.

Hilton, T. L. & Lee, V. E. (1988) Student interest and persistance in science: Changes in the educational pipeline in the last decade. *Journal of Higher Education*, 59, 510-526.

Hogan, D. & Astone, N. (1986) The transition to adulthood. *Annual Review of Sociology*, 12, 109-130.

Lewko, J. H., Hein, C., Garg, R., & Tesson, G. (1993) Transition of adolescents into science career pathways. In P. Anisef & P. Axelrod (Eds.) *Schooling and Employment in Canada* (pp. 65-88). Toronto: Thompson Educational Publishing, Inc.

Lewko, J. H. & Tilleczek, K. (1993) Policy issues for youth in transition from school to work. Unpublished paper, Laurentian University.

Lowe, G. S. & Krahn, H. (1991) *Highlights of the School to Work Transition in Edmonton, Toronto and Sudbury 1985 -1989*. Edmonton: Department of Sociology, University of Alberta.

Natural Sciences and Engineering Research Council of Canada (1989) *Ten Years to 2000: A Strategy Document*. Canada: Minister of Supply and Services Canada.

Office of Technology Assessment (OTA) (1988) *Educating Scientists and Engineers: Grade School to Grad School* (ED SE 049 166). Washington, DC: US Government Printing Office.

Poole, M. (1989) Adolescent transitions: A life-course perspective. In K. Hurrelmann and V. Engel (Eds). The *Social World of Adolescents: International*

Perspectives (pp. 65-68). Berlin: Walter De Gruyter Press.

Roberts, K. & Parsell, G. (1989) Recent changes in the pathways from school to work. In Klaus Hurrelmann and Uwe Engel (Eds.), *The Social World of Adolescents: International Perspectives*. Berlin: Walter de Gruyter Press.

Sonnenfeld, J. & Kotter, J. (1982) The maturation of career theory. *Human Relations, 35*, 19-46.

Steinberg, L., Lamborn, S. D., Dornbusch, S. M., & Darling, N. (1992) Impact of parenting practices on adolescent achievement: Authoritative parenting, school involvement, and encouragement to succeed. *Child Development, 63*, 1266-1281.

Facilitating Transition from School to Work in Japan: Why it Works

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The economic downturn in major Western industrial societies in the last decade has made it difficult for young people to successfully enter the workforce and to achieve a smooth transition to adulthood. These difficulties initially stimulated me to focus on their dispositions (such as lack of relevant skills, the "right" work attitudes, etc.), and to then examine their schooling which, it is claimed, has failed to equip them for the world of work. These explanations appealed to the public's "common sense". Enough studies (Roberts, 1984; Grubb & Lazerson, 1982), however, suggest that the causes of youth difficulties relate to the poor economic conditions and, in particular, the labour market opportunity structure which discriminates against youth. Competing in the "free" labour market, employers, quite understandably, prefer "already trained" mature, older workers to unexperienced youth in order to minimize their costs of production. In the period of economic downturn, this market-led practice denies large numbers of young people entry to the already scarce pool of available jobs. This situation is likely to continue unless some regulatory mechanisms exist to protect school leavers from the harsh market forces that determine employment allocation.

Such a regulatory practice exists for Japanese high school students through an arrangement called the job referral system (JRS). The JRS is a school-based employment referral system managed by committed teachers at individual schools. Each school maintains a network with employers, provides job openings and information relating to various companies to all its students, guides them in their decision making, and helps prepare them for pre-employment examinations and interviews. I suggest that under the JRS, job allocation is conducted as a part of schooling processes; and that as such "educational" imperatives (as defined by teachers) direct job allocation for high school students. I believe that this highly systematic practice protects high school graduates from competitive labour market forces and alleviates the effects of the disadvantages which some students might possess (e.g.; low academic marks, minority background), in an attempt of ensure that all high school students obtain jobs upon graduation. Although the structured practice restricts the freedom which well-resourced students otherwise might have enjoyed, I would contend that the JRS serves to maximize opportunities for those most disadvantaged.

School to work transition under the JRS is practised at two urban, vocationally oriented high schools I will refer to as Imai Tech High and Sasaki High. My aim is to examine the possibilities and limitations of a "regulated" job allocation mechanism for young workers, and to address the issue of social justice for non-university bound youth. While the JRS is far from perfect, it offers an opportunity to reflect upon our implicit cultural assumptions about youth and the market-run job allocation process.

After opening with an overview of Japanese schooling and employment practices, I describe the school-based job referral practice as experienced by the students and teachers. I then explain three key features of the JRS: (1) the school's control of its network with employers; (2) the job allocation conducted as a part of the schooling process; and (3) the protection of young people. Following this, in order to discuss the extent to which the JRS facilitates young people's transition, I raise three issues: employment placement

and stability, informed decision making, and social justice and the limitations of the JRS.

The Japanese Context

Entry from secondary school to workforce must be understood in the context of contemporary Japanese schooling and employment practice. Students who enter the workforce must be seen in relation to the overall school population and to the employment practices of Japanese firms.

The present form of Japanese schooling, the 6-3-3-4 system, was introduced by the Allied occupation after the World War II and, at first glance, resembles the American system. The major difference between the two systems is the Japanese central government's power in determining curriculum and major policy issues. Local education boards (both at the level of provincial and municipal governments) are left to supervise the day-to-day running of schools. Since educational policies derive from the central government, either through its own initiatives or in response to input from local education boards, the central government is able to integrate "national needs" into its education policy. However, as is the case elsewhere, policy changes at the government level have not always resulted in changes in classroom practice. Policy implementation involves local education boards and individual schools, and eventually depends on acceptance by teachers.

Japanese children start primary schooling at age six. They attend primary school for six years, and then junior high school for three years. Virtually all children complete compulsory education by finishing junior high school. Most primary and junior high schools are run by local government. The syllabus is provided by the central government, while textbooks are selected by the relevant local education board. The curriculum is broad, and includes music, calligraphy, physical education, art, and home science. Since the students have almost no subject options until the end of junior high schooling (at 15-16 years old), differentiation based on subject choice does not occur. In 1990, at the end of nine years of compulsory schooling, 95% of the students entered senior high school while the remainder either proceeded to vocational training or entered employment (*Japan Statistical Yearbook*, 1991, p. 665).

Senior high schools offer two kinds of curriculum orientation: general (academic) courses and vocational courses (including commerce, industry, agriculture, home economics, etc.). The two courses are usually offered in separate schools, with a few exceptions. About one-third to two-fifths of the vocational course curriculum comprises "vocational" subjects, the remainder being general subjects. In contrast to the Canadian "cafeteria system" (Gaskell, 1991, p. 66) where individual students create their own curriculum by choosing option subjects, Japanese students have a very limited number of option subjects. For instance, once enroled in a particular vocational course (e.g., commerce), students have only a few electives within that particular course (e.g., bookkeeping, abacus or commercial English). In 1990, 74% of all students were enroled in a general course (*Japan Statistical Yearbook*, 1991, p. 665).

A major differentiation among Japanese children takes place when students enter senior high school at age 15. A hierarchy based on relative difficulty of entry is found in most school zones (Rohlen, 1983, p. 11). The nature of this hierarchy is too complex to generalize here, given regional divergence. Suffice to say that curriculum orientation, the governing body of the school (government or private), and school history, in that order of importance, are determining factors. Vocational courses occupy a lower stratum than general courses due to the relative ease of gaining admission to them, and the lower level career patterns which their graduates tend to follow. In 1987, 71% of vocational course leavers entered employment directly, in comparison with only 22% of general course leavers. Only 10% of vocational course leavers proceeded to tertiary institutions, while the corresponding figure for general course leavers was 39% (Japan, Ministry of Education, 1988, p. 48-49). Even between general courses, career patterns after graduation are diverse, depending on the relative prestige of each school. Further ranking within general or vocational courses is in part affected by whether the school is a government or private institution. As a general rule, public senior high schools (mostly run by prefectural education boards) rank higher than private schools, except in the

case of a small number of elite private schools.

Schools located at different ranks in the hierarchy provide quite distinctive life courses for their students after graduation. Those from the top range general high schools would proceed to prestigious universities, and then on into professional and white collar occupations, while those from the middle range general high schools would enter less difficult universities and then occupy middle range positions in the workforce. Graduates from the lower range schools, often vocational high schools and lowly ranked private general high schools, commonly enter the workforce directly and settle on the lower mass strata of the occupational hierarchy. Therefore, the course (general or vocational) taken at the senior high school level, and the relative ranking of each school, has a narrowing effect on subsequent occupational decisions (Bowman, 1981, p. 28; Evans, 1986, p. 17).

The senior high school hierarchy also reflects the students' family background, although the hierarchy is based on the relative difficulty in gaining admission through entrance examinations and is thus considered "meritocratic" by some (Cummings, 1980). Students of the top ranking schools tend to have well resourced families, while those in the lower rank schools, such as vocational high schools, are likely to come from poorly resourced and /or minority families (Rohlen, 1983; Okano, 1993, p. 68-69, 75). The two schools which I studied, for instance, had relatively more students from minority, single-parent, and lower income families than the city's average (Okano, 1993, p. 242). Once students are attending a particular school, differences in each school's culture reinforces their family differences, and legitimates the divergent outcomes of such schooling. Family advantages and disadvantages are transformed into educational advantages and disadvantages. One can now discern typical portraits of students who enter the workforce directly from secondary school. They are relatively low achievers in academic terms, most of whom had already decided not to pursue further education when they entered senior high school. They are likely to come from relatively less resourced families, including minority and single-parent families.

The employment practices of companies also impact on young people's entry into the workforce. All new employees commence work on April 1st, the beginning of the fiscal year. Ten months prior to that, employers start recruitment activities to secure new graduates. In the case of high school, graduates are guided by particular rules set down in the institutional agreements with schools. Graduates are recruited through each company's own recruitment examinations (written and interviews) and are given initial training upon entry. Male employees of large corporations are able to secure life-time employment, although this is changing. School qualifications (degree, high school diploma) determine the starting salary and subsequent annual increments. Lack of relevant work experience is not as disadvantageous as it seems to be in the UK and US, since employers expect little in the way of specific work knowledge or skills from new recruits.

School-based Job Referral: The JRS

The job referral system (JRS) is a highly organized institutional arrangement run in collaboration by three main players: employers, teachers, and the Public Employment Security Office (PESO). JRS endeavours to ensure that all students (regardless of family resources) have equal access to employment opportunities. The crucial agents in the middle are the teachers, and the most important site for its facilitation is the individual school. The Department of Guidance for Life After School (DGLAS) at each school, which consists of several teachers, is the major body managing vocational guidance and job referral. DGLAS teachers are also concurrently subject teachers, but are exempt from having homeroom classes. Another major body in this practice is the "gakunen", the group of third-year homeroom teachers, the third-year dean, and sub-deans.

Under the JRS, the DGLAS at each school maintains a network with companies, receives recruitment cards (RCs) from companies, processes large amounts of information about these companies, and makes it available to students. Almost all students obtain jobs through these RCs. The DGLAS and home room teachers conduct intensive preparation for recruitment examinations and provide detailed guidance and

advice. A major feature of the job referral practice is the highly organized and wide-ranging nature of the schools' employment-related activities and the staff's commitment to it.

I later illustrate in a detail the eight "critical phases" which I identified in the transition. First, I discuss the institutional agreements pertaining to the employers, schools, and the PESO, which set the external framework of each school's practice and provide for a systematic and well-organized transition process. These agreements relate to: (1) the specific dates when employers can start sending RCs to schools and conduct recruitment exams; (2) a principle of "one company for a student at a time"; (3) a proviso that employers not meet individual students until the recruitment exams; and (4) a rule requiring RCs to be approved by PESO before being sent to schools. These agreements are restrictions on employers, in terms of their free access to prospective recruits, and in that respect do not seem to suit their interests. They were proposed by schools, negotiated with employers and the PESO, and reluctantly agreed to by the employers. Why do schools want such rigid requirements?

First, by having specific dates when employers send RCs and conduct recruitment examinations, schools are able to plan an annual schedule of schooling, organize vocational guidance, and prepare students for the recruitment exams more effectively. Schools want to have recruitment exams as late as possible, since they fear that school routines may be disrupted if employers are free to conduct recruitment earlier.

Second, the informal "one company for a student at a time" agreement forces students to reach a final decision before submitting their application to employers, and avoids the confusion that might result if a student is offered more than one position. Furthermore, in the absence of such a provision, weaker students may not receive any job offer. In other words, this agreement softens "free-market" competition among the students within a school, distributing job opportunities more equitably among both weak and strong students. The agreement may mean a compromise for ambitious and "powerful" students, but seems to serve the interests of the students as a whole (Umetani, 1985, p. 23-24).

Third, employers are precluded from meeting students before the recruitment exams because the school wants to prevent employers from exerting unfair influence on the decision-making of "their" vulnerable students.

Fourth, all RCs sent to high schools need approval from the PESO regarding working conditions since schools do not want sub-standard jobs for their students. With the PESO's stamp of approval DGLAS can force the PESO to take action in cases where the conditions given in the RC were not observed by the employer. Schools consider their students to be immature and vulnerable, and requiring "protection" from adults. Teachers also typically hold a suspicion that the "real world" may be unnecessarily ruthless towards, and exploitative of, "their" students.

In summary, the institutional agreements derive from "educational" considerations on the part of schools to prevent disruption of class routines so that students continue learning at school until they graduate; to facilitate informed and rational decision-making; to provide equal employment opportunities to all; and to protect vulnerable youth from the harsh aspects of "the real world".

Schools start job referral planning for their upcoming graduates at the beginning of the academic year (in April). Below I summarize the eight "critical phases" of school to work transition over the final year of high schooling. More detailed accounts are available elsewhere (Okano, 1993).

Phase 1 (April to June): Ground Work

DGLAS informs students of the specific steps involved in the job decision making and acquisition procedure in order to raise their consciousness and to stress the importance of the process before them. It does this by organizing meetings for third-year students and their parents, and by inviting former students now in the workforce to give talks on their work experience. By this time, students are expected to have decided on whether they will proceed to further education (including tertiary education), to civil service employment or to employment at private companies. The majority of students at the two schools I studied were into the last category. The

decision-making process culminates in the June three-party (student, parent(s) and home room teacher) meeting, which the school organizes in order to discuss options for the student's life after completion of school. Meanwhile, DGLAS teachers make goodwill visits to companies which are already part of the school's network, and call on unfamiliar companies with the hope of enlisting them as potential employers of future graduates. This is also an opportunity for the teachers to monitor how well the ex-students are coping with their work environment, and to check on working conditions at both familiar and unfamiliar companies. Employers, on the other hand, make personnel plans for the next fiscal year, and also conduct "courtesy visits" to schools to maintain or initiate these relationships themselves. The extensiveness of such activities on the part of both school and employer depends on the labour demand-supply balance at the time.

Phase 2 (July and August): Selecting Companies

Around July 1st employers are permitted to begin sending recruitment cards (RCs) which describe job openings and working conditions to the schools of their choice. The three institutional agreements previously mentioned apply, beginning with the restriction which prevents employers from issuing their RCs prematurely. The PESO decides the actual date in consultation with the schools and employers. Second, employers must get their RCs approved by the PESO before forwarding them to the schools. The PESO's stamp of approval on a RC confirms that "appropriate" working conditions apply in respect to that job. Third, employers are not permitted to meet individual students until the recruitment exams in September.

The DGLAS processes the information on the received RCs, and provides a list of job openings which is accessible to all students. Students decide, in consultation with their parents and teachers, on several specific companies and submit a list of preferred options. The final list must be approved by the home room teacher.

Phase 3 (August): Internal Selection

Under the "one company for one student at a time" rule, a student can make a single application at any one time. Applications must be accompanied by a recommendation letter from the school. As a result, most schools conduct an internal selection meeting at which time the final decision about the specific position each student is to apply for is made. This often means having to decide among a number of students who are interested in the same position. The internal selection meeting consists of third-year home room teachers and DGLAS teachers. Their decisions are based on their information about each student and the position in question.

Phase 4 (late August to September 14th): Application and Preparation for Exams

Once a specific position is decided for each student, the student forwards their curriculum vita and applications to the respective companies via the school. The date at which this occurs is determined, once again, by the PESO in consultation with schools and employers. The school then prepares the students for the forthcoming recruitment examinations.

Phase 5 (September 15th to late-September): Recruitment Examinations

Individual employers conduct recruitment examinations from the middle of September (once again the exact date is decided by the PESO in consultation with schools and employers). Because a student can sit for only one examination at a time, employers who conduct their screening at the earliest opportunity are more likely to be able to pick from the best candidates.

Phase 6 (late-September onwards): Follow-up Action

The results of the recruitment exams are reported to DGLAS within a week of the exam. If a student is successful, he or she writes an acceptance letter to the employer. Because of the "one company at a time" agreement, students rarely turn down an offer. If a student fails, he or she consults DGLAS and their home room teacher, decide on a position among those still available,

and repeats the application and examination procedure. However, as a further consequence of the "one company at a time" agreement, the remaining positions are often not as "desirable" as the original ones. In other words, the agreement tries to offer every student a fair first chance.

Phase 7 (October onwards): Post-examination Routine

Most students obtain employment (starting the next April) by November, and in the following months continue their school routine. Since one condition of a job offer is graduation from high school, students still need to apply themselves to their studies, although typically with a greatly reduced level of motivation. Employers contact the new recruits by sending out company newsletters and books about the company; some even setting assignments on such job-related areas as writing, banking or computer programming. They may also invite their new recruits to company parties or have them measured for uniforms. Students are usually delighted to receive such attention and feel that their future company cares about them.

Phase 8 (January to March): Official Exit and Entry

Schools hold graduation exams at the end of January, and the graduation ceremony, marking the official exit from high school, takes place in late February. In March, over half of the students receive training from their prospective employers. On April 1st, these young people officially enter their workplace through "new recruit entry" ceremonies which each employer organizes.

Key Features of the JRS

Three key features emerge.

The School's Control of Its Network with Employers. Studies in the UK and the US have shown that recruitment through "grapevines" or personal networks is not only widely observed but also very powerful across all categories of jobs (West & Newton, 1983, p. 66; Moore, 1991, p. 289-290; Roberts, 1984, p. 51-52; Peterson & Rabe, 1986, p. 60); and that this practice discriminates against those who lack access to network membership, often, stereotyped minority groups (Moore, 1991, p. 291; Roberts, 1984, p. 52; Peterson & Rabe, 1986, p. 60). The JRS formalizes the use of such informal employment practices (i.e., based on "who you know"), by having each school develop and "control" a social network with employers. Under the JRS each school provides "market contacts" to all its students through this network.

This has two merits. First, employment openings are given equally to all students regardless of their family backgrounds (including minority status). This enables those who cannot resort to a family social network to utilize the school's network. Second, it is important that the school oversees the students' employment selection and acquisition process and sets the selection criteria for employment. This practice alleviates the kind of contradiction which often arises from the gap between the employment selection criteria which the school assumes will be used and those actually applied by employers (Moore, 1991, p. 276). A student who lacks the sort of dispositions which the school considers desirable can often obtain employment through family connections, while other students, having the necessary attributes for that particular job are unable to compete for it (Brown, 1991, p. 100). Such a situation undermines the school's effort to have students develop certain dispositions (such as manners, correct language usage, and other social skills).

Job Allocation Conducted as a Part of Schooling. The popular response to young people's difficulties in finding employment in the Anglo-Western societies has been "vocationalism", which is claimed to bridge the gap between schooling and the world of work. Vocationalism is an introduction of vocational elements into the curriculum, either as a part of mainstream schooling for all students, or as a separate course for designated groups of students who are identified as being at "risk" (e.g., Young Training Scheme and TVEI in the UK). "Vocational" elements can include technical skills, social skills or knowledge of the world of work. The effectiveness of these programmes has been questioned, and their inherent contradictions are discussed by various observers (Lee *et al.*, 1990; Dale *et al.*, 1990; Holt, 1987).

The JRS does not emphasise the acquisition of specific vocational skills. Schools are aware that employers generally do not consider these skills themselves, as crucial for employment, since companies commonly provide initial training to new employees; the employers are more concerned with an employee's capacity and willingness to learn. Although students at Japanese vocational high schools do learn technical skills in vocational subjects such as bookkeeping, wordprocessing, computer programming, furniture production, technical drawing, machinery, electronics basics, motors, measurement and control, etc., these skills are not considered prerequisites for employment.

The school's most important direct contribution to students' entry into the world of work is the employment network, specific job information, and guidance it provides. One can call this a form of "vocational" education. Students receive information relating to specific positions (working conditions, work content, in-service training possibilities, the company profile, opinions about the company held by ex-students of the school who work there, etc.), and are urged to consider the prospect of these positions, to consult family and teachers, and to decide on their future. This may involve negotiations with fellow students where two or more students are interested in the same position. If a student's decision is considered "inappropriate" or risky in terms of likelihood of success, the school asks them to consider other options.

Job referral for high school students under the JRS, as I have shown above, is an educational activity. It is not dominated by economic imperatives or conducted to satisfy the employers' demands. Given that job allocation by itself is an economic activity, it is interesting to note that under the JRS, job allocation is accepted as a part of the schooling process; as such, educational considerations are allowed to direct job allocation for high school students. One of these educational considerations is to protect high school students from labour market forces.

Protection of the Young. Students' job decision making and acquisition is performed in a structured and systematic way through the four institutional agreements referred to and within-school arrangements. These processes and safeguards mean that students are "protected" from the existing labour market forces. They neither have to search for employment in the "open market", nor are left to "do it yourself".

DGLAS screens job openings and will not introduce positions which they consider inappropriate. It discourages a student from trying for positions which they deem unsuitable for that particular student. DGLAS teachers base their judgements on the school's wealth of accumulated data relating to the participating companies and the positions offered, and on their knowledge of the individual students during their three years at the school. DGLAS also undertakes an investigation of unfamiliar companies, before allowing students to apply for jobs with them. DGLAS teachers take turns to visit companies in order to "study" their workplaces, and claim that they can elicit relevant information more effectively than the students, who lack the necessary maturity. One DGLAS teacher commented:

> *Students are not yet mature enough to make a proper judgement, certainly not to the same extent as we do. Also, students can't see the subtle clues regarding the company's economic and employment situation from just talking to the company's personnel people.* (Fieldnotes, 20/6/89).

At one school, for instance, eight DGLAS teachers visited about 125 companies over two months, most of which were already part of the school's network. The information gained forms a pool of valuable data for student guidance.

Home room teachers and DGLAS try to do their best to prevent students from making "mistakes", by predicting likely mishaps and potentially traumatic experiences, and by advising them accordingly. Nevertheless, teachers can not force students to take their advice. There are cases where students, both overbidders and underbidders, cling to their initial decisions despite DGLAS's suggestions otherwise. One of the top students chose a driver's job at a small-size transport company. His home room teacher and DGLAS teachers suggested what they considered to be a "better" job, a trainee position in the giant Mitsubishi conglomerate, but the student in question still preferred a driver's job. In

response, teachers suggested a driver's position at a bigger company. Even then he was still determined to try for the position at the small company. Consequently, DGLAS investigated this company on his behalf, and eventually agreed to let him pursue his wish. DGLAS's intent is to provide as much information as possible about a particular position and its alternatives, and to recommend decisions which they think will best serve the student concerned.

A compelling assumption underlying the JRS and the teachers' activities is that high school students lack the maturity and experience necessary to secure suitable employment and, in this regard, need protection and assistance from adults (in this case, teachers, families, government agencies, and employers). Those used to the "do it yourself" approach and who attach a high value to individual independence and initiative, might see the JRS practice as stifling and constraining. That was the way I saw it at the beginning. However, the concept of "youth" - like adolescence and maturity - differs across societies and sub-cultures, and defies universal definition (Furtuijin et al., 1987, p.11). The accepted length of youth dependency, accordingly, also varies between cultures (both ethnic and sub-cultural) - in Japan this period is generally longer than in the Anglo-West. We may believe that adolescents mature through making their own choices and judgements, and mistakes, which requires that they are given the freedom to do so. However, the Japanese seem to consider maturation as a process of integration into the larger society, from family and school group, to work organization membership and parenting roles (Rohlen, 1983, p. 220)

For minority students the school's protection takes a more elaborate approach. Korean residents (now second or third generation) and buraku people (descendants of ex-outcastes) still face discrimination in the employment market (Rohlen, 1981, p. 182-222; Shimahara, 1984), although the situation has improved considerably. The DGLASs at the two schools were both fully aware of which students came from these minority groupings, and exercised affirmative action in line with their goal to ensure that minority students succeed in the first round recruitment examinations. To achieve this, DGLAS conducted detailed investigations of, and negotiations with, individual companies before sending any of these students to take their recruitment exams.

The DGLAS developed, as a result of past experience, and from exchanging information with other schools, a list of companies which (1) provide a comfortable working environment for minority students, or (2) take minority students but where these recruits have found it uncomfortable to work, or (3) simply do not take minority students. First, the DGLAS tries to persuade minority students to apply for the first category of employers, although they are few in number. Second, before sending a student's application form to the first or second category companies, the DGLAS contacts the company in question and confirms that minority students would be accepted. If the DGLAS does not receive a definite positive answer they encourage the student to apply to another company. Third, when a minority student wants to try for a specific company which is not already part of the school's network, the school investigates the company and approaches them to see if they would be willing to accept a recruit with a minority background. Again, if the DGLAS receives a negative reply, or is otherwise not convinced that a minority student could be successfully placed with the company in question, the student is encouraged to apply for a position at another, familiar and "safer", company. (For firther details, see Okano, in press.)

Does the JRS Facilitate Transition?

Does the JRS in fact "facilitate" school to work transition? There is no simple answer, since transition is contingent upon several factors outside the JRS, such as employment opportunities and individual students' initiatives. It could well be that some students would have made a similar transition in the absence of the JRS. In order to address the effectiveness of the JRS, I raise three issues: employment placement, informed decision making, and social justice and limitations of the JRS.

Employment Placement and Stability. How "successful" was job placement for the 1990 graduates? As an indication it is useful to examine the employment trajectories of graduates during their initial two years in the workforce.

Six months before graduation over 90% of students had obtained jobs. By the time graduation came, virtually all students had employment to start in the following month. In some cases the jobs were not the students' first choices, but they at least had a starting place in the workforce. In January and February 1992 (two years after graduation), I visited the two schools to follow up on these 1990 high school graduates. At Imai Tech High, 17.3% of those who entered employment in April 1990 had resigned their first job. At Sasaki High, the percentage was 9%. The DGLAS of both schools confirmed that these numbers were comparable with those of other years, but stated that they would like to have seen a lower turnover. At Imai Tech High, about one-half of those who resigned did so in the first 6 to12 months of employment, while at Sasaki High they concentrated in the initial 6 months.

The schools encouraged ex-students to contact the school staff for advice and help when having difficulties at work and considering resignation. However, not all such graduates consulted with or informed the schools of their actions. As a result there were: (1) those who consulted DGLAS or their former home room teachers when they considered quitting and sought their advice; (2) those who informed the school of their resignation and sought the school's help to find other employment; and (3) those who failed to contact the school either before or following their resignation. At Imai Tech High for instance, 15 of the 32 ex-students who resigned visited the school when they were considering leaving their first employment.

The DGLAS attempted to help any ex-students who consulted the school prior to submitting their resignation (as was expected by the school). Assistance was given despite the fact that the school is not officially responsible for job referrals for ex-students from three months after their graduation. Ex-home room teachers and/or DGLAS teachers listened to the students' complaints and reasons for considering a job change, and gave advice accordingly. The most frequently cited complaints involved "human relationships" in the workplace. If the DGLAS thought the company might still be able to do something to assist the young worker (such as shifting them to another section), they contacted the company personnel department and requested such an arrangement. If the complaint related to the work itself (e.g., the worker is scared of the machine or chemicals that they work with), DGLAS considered alternative employment options. In such cases the DGLAS assist the ex-student to find a new position through the school's network with employers. Those who resigned from their first employment (which they obtained through the school network) without notifying the school, embarrassed DGLAS. DGLAS only learned of these resignations when informed by the company personnel departments, to which DGLAS then paid a visit in order to apologize for the sake of maintaining goodwill.

The school's network with employers, and both parties' endeavour to maintain good relationships for the sake of future recruitment, seem to assist the school to monitor the ex-students who are placed in employment through the school's network. The turnover rate in respect of initial job placement is kept low by the collaboration between the school and employers.

Informed Decision Making. Students must make decisions throughout their schooling; for instance, which subject to study and which sport to play. However, decisions made at the exit point of schooling are more crucial, in terms of their likely effect on a student's subsequent life course. It is somewhat ironic that students face such choices while still in the midst of finding out about themselves, and are typically lacking experience and knowledge of the outside world.

Ideally, students should possess adequate information and knowledge about feasible options, in order to be able to calculate their relative costs and benefits, and to arrive at an optimal choice. Another hypothetical construct sees students having little room for "choice" since their decisions are determined by external constraints over which they have no control. In the real world, students must confront the given constraints. Despite possessing incomplete information relating to feasible options, they must consider the pros and cons of the various alternatives in reaching a decision. Each student's decision making is influenced by their individual perception schema, values and perspectives, which tend to conform to family or class-specific expectations. The range of jobs desired by stu-

dents at the two schools as a collective, strikingly reflected the types of employment gained. Students adjusted their wishes to what they considered possible and suitable.

The JRS seems to promote an informed and "rational" process of decision making. Under the JRS, schools provided a larger set of options (through RCs) than any individual could otherwise be exposed to, as well as comprehensive information about each job, encompassing both the DGLAS's historical data and their estimation of future trends. Students were urged to consider expected outcomes, and were led through the series of concrete steps involved in the job acquisition process in an almost paternalistic way. Teachers attempted to make students aware of and informed about alternatives which they might not have already perceived, and to provide the basis on which students could evaluate the prospects of each alternative themselves. There were a number of "underbidders" and "overbidders" whom the DGLAS tried to persuade to settle on "appropriate" positions. These efforts are in many cases successful, but on occasion a student cannot be swayed from pursuing a particular course that the teachers deem unsuitable.

Social Justice and Limitations. I have touched on equity issues at several points in this paper. I refer to disadvantaged students (including those from minorities, lower income families, etc.) and young people as a group.

Each school has control of its network with employers, and provides job openings to all students through it. Since all students have equal access to the school's network (unlike family networks), this practice seems to offer more equitable transition. Students are provided with job opportunities independently of family background, and can acquire employment through individual merit (as defined by the school) rather than through family contacts. The majority of students at these schools obtained jobs through the school's network. The few remaining students used family contacts. It must be noted that only those who possess such family resources can resort to them, and that students lacking them are therefore relatively disadvantaged. Given that the majority of non-university bound students come from relatively disadvantaged families, compared with society as a whole, the JRS enables schools to act as a substitute for family resources by offering contacts with employers.

The JRS tries to allocate job opportunities to all students within the school, by protecting the "weaker" students (who must compete against the more "attractive" students within the school). The "one company for a student at a time" agreement, for instance, alleviates free standing competition among the students within a school. It prevents the possibility of a situation where some students receive several job offers while others, considered less promising by employers, may receive none. They may want to apply to several companies at the same time. However, it better serves the interests of the students as a whole. The JRS attempts to minimize the disadvantages pertaining to individual students, including minority status, physical dispositions, and low academic marks. Such students receive extra assistance from the school in order to obtain appropriate jobs.

An important tenet of the JRS is that high school graduates do not compete directly against adults in the labour market. In a way, high school graduates have their own separate labour market within the overall one, since employers deal directly with the schools for recruits. This special labour market and the associated job acquisition process (job allocation process) is not free-standing but highly regulated by institutional arrangements. It offers a protective mechanism for the young people who are vulnerable and possess less work experience and knowledge of the world of work. Employers must conform to the "agreement" with schools and the government employment agency. No such regulation applies to the adult labour market.

One of the serious limitations of the JRS derives from the very fact that students' job opportunities are given, and are therefore determined to a large degree, by the individual school. Among the schools whose graduates typically go directly into the workforce, differences across schools are not so significant since such schools are all committed to job referral activities in order to improve the employment prospects of their graduates, as opposed to preparation for university entrance. However, newly established

schools struggle at the outset to create social networks with employers. Students in rural schools do not have the same access to job opportunities as their counterparts in cities, although the DGLAS try to maintain networks with employers by travelling to local cities, and through the assistance of the local PESO.

A more serious difficulty arises when students are in the "wrong" kind of schools. Imagine students who entered an academic school in the hope of going on to university but who later decide to start work immediately after finishing high school. At such academically oriented schools the DGLAS's priority is to prepare its graduates for prestigious universities rather than to cultivate networks with employers. In such a case, these students must take more individual initiatives in order to have the DGLAS act on their behalf.

Conclusion

In Japan an institutional arrangement known as the JRS regulates job allocation for high school graduates. This practice protects the graduates from labour market forces, and alleviates the effects of the disadvantages which some students possess (e.g., low academic marks, minority background), thus ensuring that all high school students obtain jobs upon graduation. The JRS is a school-based employment referral system, whereby the school conducts job allocation for students as a part of their schooling, and which hence forms part of the "educational" processes in their last year of high school. Under the JRS each school cultivates and maintains an extensive network with employers, makes specific job openings and information relating to these positions available to all students through their network, guides students to make informed and rational decisions, and monitors ex-students in their first employment. An underlying assumption of those involved in the practice is a view that high school students are still immature and vulnerable, needing adult assistance to find "suitable" employment. The driving force behind JRS is the teachers who strive in an almost paternalistic way to deliver what they consider the best employment outcomes for their students. An important consequence is that the JRS provides more equitable school to work transition to high school graduates as a whole, than its absence would enable.

It is clear that a young person's initial employment experience is a crucial factor in obtaining an adult identity and self-esteem and that every member of a society undergoes this transition at some stage; teenagers, by themselves, are typically ill equipped to make an optimal decision at such a crucial juncture in their lives. To ensure young people's smooth entry into the workforce a society can offer some kind of regulatory mechanism to allocate jobs, rather than simply leaving this function to market forces. While such intervention may restrict the "free-standing" choice of some, its highly structured practice is likely to increase the benefits to those most in need.

References

Bowman, M. (1981) *Educational Choice and Labor Markets in Japan*. Chicago: The University of Chicago Press.

Brown, P. (1991) Schooling and employment in the United Kingdom. In Ashton, D. and Lowe, G. (Eds) *Making Their Way: Education, Training and the Labour Market in Canada and Britain* (pp. 85-108). Milton Keynes: Open University Press.

Cummings, W. K. (1980) *Education and Equality in Japan*. New Jersey: Princeton University Press.

Dale, R., Bowe, R., Harris, D., Loveys, M., Moore, R., Shilling, C., Sikes, P., Trevitt, J. & Valsecchi, V. (1990) *The TVEI Story: Policy, Practice and Preparation for the Work Force*. Milton Keynes: Open University Press.

Evans, R. Jr. (1986) *Vocational and Occupational Training of Non-college Bound Youth*. Washington DC: Office of Educational Research and Improvement. (ERIC Document Reproduction Service No. ED 271403).

Fortuijn, E. D., Hoppers, W. and Morgan, M. (Eds.) (1987). *Paving Pathways to Work: Comparative Perspectives on the Transition from School to Work*. The Hague: Centre for the Study of Education in Developing Countries (CESO).

Gaskell, J. (1991) Education as preparation for work in Canada: Structure, policy and student response. In Ashton, D. and Lowe, G. (Eds.) *Making the Way: Education, Training and the Labour Market in Canada and Britain* (pp. 61-84). Milton Keynes: Open University Press.

Grubb, W. N. & Lazerson, M. (1982) Education and the labor market: Recycling the youth problem. In Kantor, H. and Tyack, D. B. (Eds.) *Work, Youth and Schooling: Historical Perspectives on*

Vocationalism in American Education. (pp. 110-141). Stanford: Stanford University.

Holt, M. (Ed.) (1987) *Skills and Vocationalism: The Easy Answer*. Milton Keynes: Open University Press.

Japan, Ministry of Education (1988) *Statistical Abstract of Education, Science and Culture*. Tokyo.

Japan Satistical Yearbook. 1991.

Lee, D., Marsden, D., Rickman, P. & Duncombe, J. (1990) *Scheming for Youth: A Study of YTS in the Enterprise Culture*. Milton Keynes: Open University Press.

Moore, R. (1991) Education, employment and recruitment. In Esland, G. (Ed.) *Education, Training and Employment Volume 1: Educated Labour -The Changing Basis of Industrial Demand* (pp. 276-294). Wokingham England: Addison-Wesley Publishing Company in association with The Open University.

Okano, K. (1993) *School to Work Transition in Japan: An Ethnographic Study*. Clevedon, Avon: Multilingual Matters Ltd.

Okano, K. (in press) "Modern" Japan and social identity: Minority youth in school to work transition. In Gomes, A. (Ed.), *Modernity and Identity: Asian Illustrations*. Melbourne: La Trobe University Press.

Peterson, P. E. and Rabe, B. (1986) Urban vocational education and managing the transition from school to work. In Rist, Ray C. (Ed.), *Finding Work: Cross National Perspectives on Employment and Training* (pp. 55-86). London: Falmer Press.

Roberts, K. (1984) *School Leavers and Their Prospects: Youth and the Labour Market in the 1980s*. Milton Keynes: Open University Press.

Rohlen, T. (1981) Education: Policies and prospects. In Lee, C. and G. De Vos (Eds.), *Koreans in Japan: Ethnic Conflict and Accommodation* (pp. 182-222). Berkeley: University of California Press.

Rohlen, T. (1983) *Japan's High Schools*. Los Angeles: California University Press.

Shimahara, N. (1984) Toward the equality of a Japanese minority: The case of burakumin. *Comparative Education, 20*(3), 339-353.

Umetani, S. (1985) *Occupational Information, Placement and Choices for the Japanese Youths*. Washington, DC: Office of Educational Research and Improvement. (ERIC Document Reproduction Service No. ED 271401).

West, M. & Newton, P. (1983) *The Transition from School to Work*. London: Croom Helm.

Women, Education and Work in New Zealand: Choices and Chances

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Introduction

E te iwi e tau nei, tena koutou. E nga mana, e nga reo, e nga maunga, e nga awaawa, e nga pataka o nga taonga tuku iho, tena koutou. Tena koutou, tena koutou, tena koutou katoa. *(Greetings to all the people gathered here. Greetings to the prestige, the languages, the mountains, the valleys and storehouses of treasures of our ancestors. Greetings to you all.)*

Nineteen ninety-three is Suffrage Year in New Zealand. It is a year when we celebrate and commemorate the day, 100 years ago, when New Zealand became the first country in the world to give women the opportunity to vote; when women were enabled to enter fully into the democratic process of electing their government.

We celebrate that day not only for ourselves, but internationally with all our sisters, with all people who have had to struggle to be enfranchized, and with those who continue that struggle. This year, women in New Zealand are focusing particularly on the political, educational, social, and cultural advances they have made in the last 100 years and evaluating whether or not the realities of their lives approximate the ideals.

Nineteen ninety-three is also the United Nations designated Year of Indigenous Peoples, a year which has a particular resonance for New Zealanders. In 1990, we commemorated the 150th anniversary of the signing of the *Treaty of Waitangi*, the document which forms the basis of legal, political and social relationships between Pakeha (a Maori word used commonly to describe New Zealanders of European descent) and Maori (a term used to describe the descendants of the original inhabitants of New Zealand). This treaty has provided the means by which Maori, as the tangata whenua or the indigenous occupiers of the land, have made valid and successful claims on the state for recognition of their pre-eminent status in Aotearoa/New Zealand and recognition of their rights to recompense for past wrongs. The treaty has been the basis of Maori claims for justice to the International Court and is, therefore, of particular significance in a year that focuses on the rights and status of indigenous peoples.[1]

We have also experienced almost a decade of what have come to be known as "New Right" state policies on education and employment.[2] These policies, which have been the hallmark of conservative government throughout the western world in the last ten years, have had a particularly sharp impact in New Zealand. Other governments, for example the Liberal government in the state of Victoria in Australia, have looked with some envy at the way in which education and employment have been restructured so swiftly and so radically in New Zealand, and have set out to implement similar policies.

For all these reasons, therefore, it is particularly appropriate that a New Zealand woman be asked to speak about women, education, and work.

What I shall do in this address is provide a broad outline of the radical restructuring of education and the labour market that has taken place in New Zealand. I shall then go on to pose questions for research directions that arise from this restructuring in terms of opportunities, choices

for women, and life chances. These questions should provide some basis for further discussion during this conference.

The Context in New Zealand

From 1986 until 1992, the government in New Zealand put in place a range of parliamentary Acts that provided the foundation for a massive restructuring of both education and employment in New Zealand. The bulk of this legislation was initiated by the Fourth Labour government (1984-1990), although the current National (or conservative) government has continued the process unabated. "Fiscal concerns underpinned and were the catalyst for many of the . . . changes. Labour was anxious to rein in public expenditure, and to ensure that resources were expended prudently and to good affect" (Boston, *et al.*, 1991) since New Zealand faced a currency crisis created by foreign borrowing that exceeded the nation's capacity to carry the debt.

These Acts legislated for a fundamental change in the structures and infrastructures of government service in New Zealand. The primary targets of this restructuring (or, as the government preferred to call it, reform) have been:

1. National assets, such as transport, telecommunications, postal services, state insurance, the generation and sale of electricity, public health and housing services, and state-owned banking.

These infrastructural assets, which were owned by the people of New Zealand, were to become state-owned enterprises initially, where the bottomline would be the generation of profit rather than the provision of a non-profit community service. Where possible, the assets would then be sold on to private, competitive, profit-making corporations.

In other words, government divested itself of its traditional public service function in New Zealand - the provision of a wide range of nationalized services in the public interest - and took on a minimal interventionist role. Public services were to be generated and maintained ideally within a marketplace where consumer choice, competition among providers, and the imperative that the service produce a profit would increase efficiency and reduce cost to the client. Legislation enabling this process was enacted as the *State Owned Enterprises Act* in 1986.[3]

New Zealand's governments had been elected on platforms that consistently included the provision of a very sturdy, very broad social safety net for every citizen from birth to death. This provision came to be regarded as the birthright of every New Zealander at a taken-for-granted level, no matter what his or her political persuasion or status, and the minimalization of public provision was, therefore, novel and continues to be popularly resisted.[4]

2. Social welfare services. I saw a beggar for the first time when I visited the US three years ago; I saw homeless people standing on street corners, huddled under cardboard boxes and in doorways; I was confronted with the daily realities of people's lives when a social contract providing a strong safety net is not taken for granted as a right for everyone in society and where there are enormous disparities in the living conditions and the life chances of the wealthy and the poor.

In New Zealand, we have been a very privileged society - that is a legacy of the past 50 years of social and economic engineering, or interventionism, by successive governments, and strong export markets. Today, however, it is becoming common to see beggars, the homeless, and the distressed in the major urban areas in New Zealand and we know that the fabric of the social welfare net that we took for granted even a few years ago is torn.

Colin Lankshear (1990, p. 175) claims that the foundations for a permanent underclass have been put in place with the restructuring, particularly of social welfare policies and programs. The notion of "underclass" implies that poverty and powerlessness will be reproduced through generations into the future in New Zealand, that this is not a temporary, remediable pain that we must suffer in order to have long-term gain.

The restructuring of the social welfare system in New Zealand has had a specific impact on women. We know, for example, that women have always had an ambivalent relationship with the labour market which is reinforced by a public, a state rhetoric that situates them primarily as

homemakers and childcarers supported by men. Their vulnerability within that labour market, however, has been made explicit by recent social welfare policies which have clearly affected women to a greater degree than men, and particularly Maori and Pacific Island women who are situated primarily within a low socioeconomic stratum.[5]

These include policies that constrain superannuation or retirement benefits (which are influenced by women's reduced earning capacities throughout their working lives), policies affecting the regulation of domestic purposes benefits for single parents, the reconstitution of the accident compensation legislation and, in particular, the impact of government cuts in the funding of public health and housing and policies determining who will have access to public assistance at specific levels.

They also include policies which have hidden, indirect effects on women as primary carers and, often, sole supporters of families. For example, the political emphasis on "community care" for people with various physical and intellectual disabilities has reflected an increasingly enlightened public view of the capacities and potential of people with disabilities for maintaining a fulfilled and independent life within a community rather than an institution. However, these policies have been implemented in such a way that the financial and emotional stress and responsibilities of ensuring adequate "community care" have been borne primarily by families and, especially, the women - daughters and mothers - in those families (Munford, 1992, p. 91ff).

All of the recent social welfare policy restructuring has been implemented (sometimes explicitly) in such a way that more people, especially the young, the old, the disabled and the chronically ill, have been forced back into a dependence on support from their families rather than the state, families that have been ill-prepared to provide support in the sense that they did not expect to have to do so. This has created a complex of difficulties for women on middle to low incomes as they struggle with the effects of policies which reduce access to previously freely available welfare provisions and which reduce their income so that they are less able to afford the new, cost-effective, efficient and expensive services. Not least among those difficulties is a silencing of protest about their treatment.

3. Employment. As the restructuring of national assets and social welfare jarred New Zealanders' notions of the proper role of government, so the restructuring of the employment field demolished their comfortable vision of employer/employee relations as equitable and subject to fair arbitration and negotiation.[6]

Rosemary Du Plessis (1992, p. 216) cites the National Advisory Council on the Employment of Women on the way in which women were specifically affected by the new labour market environment in New Zealand:

> *The development of an industrial relations system which increased the power of employers in the negotiating process, given high unemployment and the concentration of women in a narrow range of jobs, was also not in the interests of most women workers. Since Maori women and Pacific Island women are over-represented among those women who are unemployed, low paid, and in jobs defined as 'unskilled', they experienced this 'unevenness' in the policies of the Fourth Labour Government most acutely.*

The "unevenness", initiated by a Labour Government with the *Labour Relations Act* in 1987 in order to facilitate the production of a "level playing field" in the labour market for employers and workers, became a downward spiral for women when the *Employment Contracts Bill* was enacted by a National Government in 1991. This *Act* enabled each employer and each employee either to negotiate an individual employment contract or to be bound by a collective, site-negotiated, employment contract. As Prue Hyman argues:

> *In practice, there is an inherent power difference between employers and individual employees, with those selling their labour, unless it is particularly scarce, in the less powerful position. . . . Small workplaces and lower paid groups are particularly vulnerable. Women and Maori are over-represented in such workplaces* (1992, p. 255).

In restructuring the labour market, from a system based on compulsory unionisation and compulsory arbitration of wages and employment conditions in national awards (i.e., pay scales), Labour and National both believed that competition, workforce adaptability and choice in the labour market, along with intensified skills training, were the key to New Zealand industry being internationally competitive and to New Zealand recovering its former high standard of living.

However, the employment policies that followed, while they included equal employment opportunity policies and programs in some areas, failed to acknowledge that the labour market is demonstrably differentiated for women and men, and that this differentiation is further sharpened for women who are not white or middle-class. Women could be forgiven for believing that this lack of visibility and lack of acknowledgment of their differing status from men, in relation to the restructuring of labour market policies, is quite deliberate and predicated on maintaining women as a reserve army of labour in times of increasing unemployment.

Women are poor by comparison with men. We know that family resources are based on income-earning potential and that a loop of disadvantage is created when that earning potential is reduced in some way; a loop of disadvantage that operates in terms of the application of those family resources to educational and employment opportunities for their children (Nash, Harker & Durie, 1992). Single parent families, predominantly headed by women, are particularly affected by the lack of economic resources. Hilda Scott (1984, p. 3) coined the phrase the "feminization of poverty" to describe the vicious circle that is set in place when women, because they are women, are unable to gain access to the labour market on the same terms as men and, when they get there, are not rewarded in the same way:

> *[the feminization of poverty is] a phrase used chiefly to describe the economic vulnerability of women who are the sole support of their children. [It is] used to refer to the whole complex of forces that keep women in an economically precarious situation - considerably more precarious than that of most men - while increasing their economic responsibilities.*

The realities and effects of poverty for women as a group have been well-documented in New Zealand and were the basis for much legislation for equal employment opportunities and employment equity , and for recommendations to government from the *Report of the Royal Commission on Social Policy* in 1988.

Yet, in June 1992, the average hourly rate of pay for New Zealand women was NZ$13.13, or about 81% of the average hourly rate for men, NZ$16.22. The same census data showed that the average weekly amount earned by women in New Zealand was NZ$474.95, only about 78% of men's weekly average of NZ$612.75 - *a reflection of the much larger proportion of women who work part-time, while men are more likely to have access to overtime* (Roth, 1993, p. 2). (Ed.-NZ$ = C$.68 = US$.54 in 1993.) Roth also cites a 1991 Ministry of Women's Affairs survey which demonstrates that women put in 66% more hours than men on unpaid housework and childcare - women are not only poor, they are exhausted!

In other words, women have a particular relationship with the labour market, one that is mediated by their "publicly private" role of homemakers and childcarers/rearers - whether or not they are married or have children. They are very vulnerable due to their status within that market which is inevitably justified in terms of their supposedly unique female roles and qualities (for example, the potentially negative effects of pursuing full-time paid work or a career on their biological functioning and their psychological development as women, their children's happiness and well-rounded development and, most significantly, their actual capacities for performing specific categories of work).

Women are also discouraged from competing effectively in the labour market in terms of the psychological, economic, and emotional effects that their pursuit of economic equality will have on men. This discouragement is reinforced by government policies that continue to discount and make invisible women's genuine differences in relation to the labour market. And it is particularly significant in the treatment of Maori women in terms of their specific differences:

> *Maori women belong to the group of women in the world who have been historically constructed as 'Other' by white patriarchies and white feminisms. As women, we have been defined in terms of our differences to men. As Maori, we have been defined in terms of our differences to our colonisers. As both, we have been defined by our differences to Maori men, Pakeha men and Pakeha women. The socioeconomic class in which most Maori women are located makes the category of 'Other' an even more complex problematic* (Smith, 1992, p. 33).

While both Labour and National enacted labour market legislation that affected detrimentally women's position in the labour market, in terms of access and income, both governments have attempted to address the notion of difference for women through the provision of equal employment policies and, in Labour's case, through legislation for employment equity.

4. Equal employment and educational opportunities. In 1985, the New Zealand government established a Ministry of Women's Affairs to provide policy advice to government on behalf of women and to promote equality of opportunity. This Ministry included a Maori Women's Secretariat, Te Ohu Whakatupu, which provided policy advice to government on issues concerning Maori women.

In early 1988, the state services and universities in New Zealand became legally obliged to provide equal employment opportunities (EEO) policies and programs. These were to be directed at the identification and removal of barriers, explicit and implicit, to the employment opportunities of women, Maori, Pacific Island and other ethnic minority groups, and people with disabilities. The programs were to be reported annually to parliament (*State Sector Amendment Act, 1988* and the *Universities Amendment Act, 1988*).

The *State Sector Act* was amended again in 1989 to place these legal obligations specifically upon all employers in the Education Service. Under this *Act*, these employers were required to operate a personnel policy containing provisions generally accepted as necessary for the fair and proper treatment of employees in all aspects of their employment including: good and safe working conditions; an equal employment opportunities program; the impartial selection of qualified persons for appointment; recognition of the aims and aspirations and the employment requirements of the Maori people, and the need for greater involvement of the Maori people in the Education Service; opportunities for the enhancement of the abilities of individual employees; and recognition of the employment requirements of women and persons with disabilities (Dwan & Smith, 1990).

The restructuring of post-compulsory education and training, known as "Learning for Life", resulted in the *Education Amendment Act, 1990* which extended these provisions to cover equal educational opportunities for the EEO target groups. The *Act* also required tertiary education institutions to include policy statements in their Charters and Statements of Objectives outlining their commitments to equity and performance indicators for measuring whether or not the institution was meeting its equity goals. An important reference in the Charter contract was to the institution's partnership obligations under the *Treaty of Waitangi* and how these were to be put into effect with Maori students and staff.[9]

In 1990 the *Employment Equity Act* established a process, to be followed by employers of 50 or more workers, for the promotion of equal employment opportunities for specified target groups.[10] However, with a change of government at the end of 1990, the *Act* was repealed. The present government then established an Equal Employment Opportunities Trust, jointly funded by the public and private sectors, the purpose of which was to provide promotion and education on the value of equal employment opportunities programs and philosophies specifically within the private sector.

The strong legislative provision for equal employment and educational opportunities outlined above arose from the political work of many women. That is, women gained political power in this area under a Labour government and they worked, particularly in the State Services Commission and the Ministries of Women's Affairs and Education, lobbying and persuading men and women in power to change the law and

then to enforce the law through monitoring and sanctions.

This created a substantial ideological and political shift in New Zealand. I was travelling in North America, Britain and Australia at the peak of our legislation for equity and there was nothing as comprehensive, particularly in relation to coverage of a wide range of target groups both in policy and in practice, except in the US.

Much was accomplished for the employment and education of target groups during that period, especially in terms of the 'invisible' outcomes - networking, institutional and attitudinal change, resource development and dissemination, and the development of high profiles nationally for target group members. One particularly useful outcome was the establishment of a range of baselines and monitoring processes for identifying and measuring the employment and educational status of target group members where possible.

Because of the political and ideological shift in New Zealand, through the battle for equity provisions in law over the past five years, women are more aware of what is possible, what can change, where they have made gains, and what they are losing at present. [1]

5. Education. Four primary objectives underpinned the massive (and ongoing) restructuring of the national, public education system in New Zealand. First, devolution of responsibility for decision-making (but not authority) to local communities; second, greater provision of choice for parents in the education of their children; third, the creation of a more closely (and some would say narrowly) monitored accountability throughout the system and, fourth, a more comprehensive articulation of education from preschool to tertiary. All of these objectives included references to the provision of a more equitable distribution of educational resources throughout a range of communities.

Education restructuring was closely interrelated with restructuring of the economy and the labour market. Both Labour and National governments desired to reduce expenditure on education (or at least to make that expenditure more cost effective and accountable). At the same time, both governments took the view that a more efficient, flexible and freely competitive provision of education and training, particularly at post-compulsory levels, was fundamental to an increase in job creation, export potential, a reduction in New Zealand's overseas debt and a rebuilding of the path to prosperity (McQueen, 1992). In other words, an increase in the quality of human capital would underpin an increase in the quantity and value of labour market production.

While there were major changes in the way that the state funded and structured preschool and primary education, and the relationships between those sectors and the state, I want to focus in this section on the changes that affected post-compulsory education, the changes that affected the nexus between education and work, which have the most potential to influence women's opportunity field and thereby their life chances. In addition, I will discuss briefly the major developments in Maori education which have the potential to impact on the choices and chances of Maori women.

Research within developed or Western nations has consistently reached conclusions which suggest that girls and boys, women and men, are schooled differently and that this schooling is gender specific even while apparently providing access to the same curriculum, the same pedagogy and the same evaluative procedures. There is a plethora of literature and research studies available now for those who seek information or debate. Just press "women" or "feminism" on your computerized library catalogue system!

I would like to take these arguments and statistics for granted today and discuss instead the major ways in which the educational restructuring will have an impact, negative or positive, on women's opportunities and chances in New Zealand, and the subsequent implications for research and practice.

The new directions of most importance for women (and girls) are: the legislative stimulation of increased competition among public and private educational providers; a substantial and growing increase in fees charged to students for tertiary education; the establishment of a national qualifications authority with consequent modularization and mobility of certification; new

post-compulsory training provisions; the provision of increased opportunities for further and adult education; and new directions in the establishment and resourcing of Maori education.

A primary objective of Labour's Learning for Life initiative (which was based on the Hawke Report, 1988) was the creation of "a level playing field" in tertiary education. It was intended, from the very beginning of the process of restructuring tertiary education, that current, state-funded tertiary education institutions (that is, colleges of education, polytechnics and universities) would be placed in a position where they would have to compete for state funding and where they would be taxed, both literally and figuratively, for possessing accumulated capital assets which private providers did not yet possess. [12]

In other words, government funding would be reduced for current providers and increased for new and/or private providers of tertiary education programs. In addition, tertiary education (and, possibly, some levels of secondary education) were to become "user-pay" in the sense that institutions would no longer be funded to the level of 100% of the costs of student enrolments. Institutions would be obliged, therefore, to charge students on a cost-recovery basis to bridge the gap between government funding and the actual cost of provision to students.

The arguments put forward by the State Services Commission and the Treasury to support this proposed redistribution of resources were, first, that the change would induce a more cost-effective, accountable, quality controlled, efficient and expanded tertiary education management and provision and, second, that it would enable consumers of tertiary education to have a real choice about where they would "invest" their education dollar.

At the same time, there was an emphasis on enabling a wider range of people to attend tertiary courses than had been the case in the past. While students would inevitably be charged incrementally higher enrolment fees under this regime, Labour intended that the equal opportunity groups would be able to take advantage of targeted fees subsidies and student loan schemes. The intention was to enable, particularly, more students from low socioeconomic groups to enrol in tertiary education and, by targeting socioeconomic status, to affect positively the enrolment rates of Maori and Pacific Island students, and women within those groups.

Labour's plan to reduce what it termed the "capture" of tertiary education by white, middle-class students (and their parents), was to be carried out to a large degree by the introduction of a national qualifications authority, the New Zealand Qualifications Authority (NZQA). The objective of this Authority was to broaden the tertiary education base and to articulate a credentialing system across all the sectors of tertiary and adult education, including the recognition of prior learning (RPL). All tertiary education and training programs, along with some secondary, some community and some work-based education and training, were to be given a weighting within a modularized system of credentialing levels. That is, if a student completed an approved course of study (or achieved an RPL equivalent) at, say, level one of NZQA's validation system, then this work could be cross-credited as a "level one" completion to other programs of tertiary study.

Theoretically, this system of post-compulsory qualification extends to the level of postgraduate certification. To date, however, the state-funded universities have resisted coming under this authority in the granting of either undergraduate or postgraduate degrees. Obviously, there is room for lack of coherence within a whole program of study (for example, within a Diploma of Teaching) unless there is some limitation on cross-crediting. It is the potential for lack of overall integration in degree programs that has formed the major part of the universities' objections to the scheme.

However, NZQA has authorised other tertiary providers, private and state-funded, to grant degrees, to provide credit within a modularized system of certification for recognised prior learning, to link accredited programs in a staircased fashion with secondary school and community programs, and to provide an articulated national system of qualifications. Universities have begun to offer Unitech and joint degree programs with both polytechnics and colleges of education and it is obvious that, whether it is resisted or not, the establishment of NZQA has had the desired

effect, first, of opening up the certification market to competition and, second, of expanding access to that market.

It is clear that, despite the developmental "glitches" and stresses in the system, more people can gain greater access to a wider variety of further education, from more providers at different levels, than ever before. And again, despite the inevitable credentialism that has followed, there are individual and societal benefits from an enlarged access to further education. These benefits do not depend solely upon the attainment of a credential that guarantees employment, but can be measured in terms of increased self-confidence and self-esteem, an increase in skills and knowledge, a greater provision of empowering choice, and a generally higher level of participatory democracy.

Marshall and Tucker (1992, pp. 58-60) have pointed out also the value, in a highly mobile country of a formal national system for recognising qualifications:

> *. . . such a system is essential if individuals are to invest in themselves and have the opportunity to realize that investment when they move. . . . It must be a national system, with national standards, nationally recognized certificates, and a system of occupational classifications that do not vary by jurisdiction. Anything less will lead to a system that will reduce the mobility of our work force or lower individuals' incentive to train or both.*

In New Zealand, there have always been nationally recognized and highly transportable vocational qualifications such as trades certificates. The problem has been that, apart from a very few professional areas (such as teaching and nursing), one apprenticeship (hairdressing) and one certification (shorthand/typing) enrolling a majority of women, this mobile credentialing has been taken up mainly by men. It has been very difficult, culturally and literally in terms of access, for women to take up, for example, most apprenticeship or certificated technical training.

The new modularized and transportable credentialing system, together with the explosion in adult and higher education provision in New Zealand, should enable many more women to access certification. Prior to the establishment of NZQA, while women could and did participate in a range of further education and some further training - for example, ACCESS or Link programs, childcare training, professional education, and so on - these tended to be discrete units with very little cross-accreditation. Now it will be increasingly possible to receive credit for prior learning[9] (which might be of an attested experiential nature; for example, work done in the community and attested to by that community), to build on this with modules of pre-Certificate level further education, and then to cross-credit these modules into the beginning levels of a certificate, diploma or degree.

McQueen (1992) stresses the importance of developing flexible, coherent links between secondary and tertiary education through the reform of the national qualifications system. As he points out, these formal certificated links will reduce age barriers to further learning opportunities and increase the opportunities for those already employed (i.e., 89% of the labour force) to participate in further education. In this context, formal recognition of prior learning is a vital component of the process that will make women's unpaid work at home and in the community visible. It will also enable women to take up opportunities for further education at a higher level than they might otherwise have done. Modularization and staircasing through further education, in addition to recognition of prior learning, provides a structure whereby women can access knowledge, certification, choices, and a real potential for control over their futures.

A corollary of the expansion in adult and further education provision is that women, who have always made up the bulk of teachers and administrators in these courses in institutions, are moving into senior management positions in polytechnics and colleges of education: their adult education, community and general studies sections are becoming valuable sources of revenue for the institutions. These women, from their own experience over many years of providing "community education" programs for, mainly, women students, are aware of the institutional barriers to women's participation in further education and are now in a position to do something about those barriers.

At the same time, however, government has reduced the funding available to community education programs that are actually located in the community rather than in institutions (for example, the programs provided for many years by the Workers Educational Association). As a result, both the availability of genuine community-based education for women and the opportunities for women's employment as tutors in these programs have declined.

Mason and Rendell (1992, pp. 178-179), referring to the growth in adult education in Australia, bemoan the reduction of government funding to the community education sector:

> *Employers everywhere are calling for literacy and organisational skills, ability to formulate goals and to work effectively with others to implement them, self reliance, adaptability, knowing how to learn and responding to locally expressed needs. . . . Few adult educators have been able to convince governments that non-formal adult education provides vocational and life skills, and should be as well supported as formal vocational education and training.*

As part of this worldwide trend away from state-supported community education to more formal, vocational, institution and industry-based adult education and training, there has been a major restructuring of transition education and the apprenticeship system in New Zealand.

It would be easy to look at the new provisions for transition education introduced in the *Industry Training Act* in 1992, the Training Opportunities Program (TOP) and the Youth Traineeship Scheme (YTS), and see them as merely a further step in the virtually annual change in the acronyms applied to transition education provisions in New Zealand since 1979, with little real change in the actual provisions. However, the *Industry Training Act* is an integral part of the wider educational and employment restructuring referred to above and, as such, has been introduced within a political field with very different objectives from merely providing a holding pen for young unemployed people until jobs become available (Nash, 1987).[11]

This *Act*, together with the *Employment Contracts Act*, attacks the power of workers, through strong unions, to determine their rates of pay and conditions of work. However, by dismantling traditional forms of apprentice training (the means by which unions controlled the entry of new workers into qualification, length of service before qualification and levels of remuneration for different work), and by introducing the concept of individual contracts rather than union-negotiated awards, the government has deliberately broadened potential entry into a range of industries and services for young people and, especially, those who have not traditionally had access to apprenticeship training in New Zealand - women.

One of the essential differences between the provisions in the *Industry Training Act*, TOP and YTS and any training or transition education previously in place is that training will be linked to national qualifications. Work-based and institution-based training will lead to recognized qualifications with the potential to open up this qualification to young women based on their ability to gain access to the appropriate courses.[12]

No reira, kei hea nga wahine? So, where are the Maori women? (Te Awekotuku, 1991). There has been a Maori focus on the development of specifically Maori education as part of the more general Maori cultural renaissance which looks to guarantees of protection for taonga, including language and culture, under the *Treaty of Waitangi*. In attempting to foster and protect Maori language and culture, Maori women have been the driving force behind the success of initiatives such as the grassroots national development of nga kohanga reo (total immersion Maori language nests)[13], kura kaupapa Maori (Maori schooling by Maori for Maori)[14], bilingual and immersion programs in schools[15], and the employment of Maori female academics in tertiary education (Ngahana-Hartley, 1992, p. 7).

They have also played a major role in developing post-compulsory training programs targeted specifically at Maori students including programs for Maori women, the establishment of Maori universities and polytechnics (for example, Te Whare Wananga o Raukawa), and the development of Maori Studies and Maori Women's Studies within universities and colleges of

education. Maori women have been fundamentally involved in establishing and developing Maori education. Smith (1992) contends that Maori women have a unique perspective on the state, a perspective which has enabled them to resist and transform their position.

How does the new qualifications system fit in with providing Maori women with better opportunities in education and employment? Theoretically, these opportunities should be more readily available for Maori women as they are for Pakeha women (see, for example, Linda Smith's, 1990, case study of a polytechnic ACCESS course for Maori women). It is possible to set up accredited courses under NZQA that are targeted very specifically at Maori women and which take into account Maori women's extensive experience in their communities. While Maori women, because of their general socioeconomic status, are particularly hard-hit by government reductions in social welfare and health provisions and by the negative effects of the *Employment Contracts Act*, they are also the recipients, as Maori, of specifically targeted further education funding which should ameliorate some of the increased costs of accessing that education. [9]

However, the Research Unit for Maori Education [RUME] (1992, p. 26) envisages a problem with NZQA-based programs. It is not that these programs exclude Maori women, but that they do not offer a Maori education. In general, RUME argues that while the NZQA proposals may have been well-intentioned they involved the conceptualizing of Maori cultural knowledge and learning in ways that are disempowering for Maori. The proposals give to government and therefore non-Maori (through NZQA) the rights to determine Maori cultural definitions. Such an approach raises questions related to the control over Maori knowledge and stands in direct contradiction to the concept of tino rangatiratanga, or Maori autonomy, enshrined in the *Treaty of Waitangi*.

Maori women, therefore, are challenged by their own unique contradictions in developing and taking up new educational opportunities. These contradictions centre around questions related to the promotion and retention of Maori culture and language, and the empowerment of Maori women within that circle which is constantly threatened with dissolution by the destructive historical and persistent effects of their colonized status.

To conclude this section on the government targeting of post-compulsory education, the growth of adult education and formal tertiary education opportunities has been made more available to women with the emphasis on modularisation and transportability of certification, as well as an increasing range of curriculum options. Competition among providers for government funding means that the tertiary providers of certificated and non-certificated courses must do their utmost to attract both male and female students into any courses they offer. The impetus, therefore, is for providers themselves to break down gender barriers to further education and skills training and certification.

While tertiary education restructuring has led to an undeniable increase in competition, insecurity and divisiveness among tertiary providers, and to a very real increase in the cost of further education for students, it has also provided the conditions under which women's educational opportunities might advance.

Research Directions

What we have with the last five years of government restructuring of national assets, social welfare, education, employment, and provision of equal employment and educational opportunities is paradox for women in New Zealand. Because women have experienced strong legislation for equity and autonomy (even where this has been repealed or undermined), they know what they can have, what is possible, what to fight for - it is very difficult to take this knowledge away once it has been gained.

At the same time, women have more opportunities open to them now to participate at all levels of education and employment than at any other time in the past 200 years.

Educational provision at all levels is fundamental to women's participation in the political process and their taking up of employment opportunities. I believe that women in New Zealand are willing now to practice the politics of the possible, to look for what can be gained and held

onto today rather than seeking only the ideal political solution, and are prepared to focus upon the specific contexts that can be used to empower women. What we need is research that integrates strongly with educational practice to discover the contexts created by the current restructuring that allow for women's choice, access, and empowerment in education and in work.

What, therefore, does research into education and work need to do?

First, it needs to be built on an integral, shared understanding that gender equity is still not a part of the international or, in most cases, national debate on educational and employment reform, nor on the agenda in most discussion about educational and labour market research (American Association of University Women, 1992, p. 1). There needs to be a solid focus in all education and labour market research on the specific siting of girls and women within that nexus, rather than reinforcing their invisibility through absence or self-conscious additions of "the women's section" in published studies.

Second, such research needs to focus particularly on the links between gender, ethnicity, sexual orientation, and class. I am not referring only to feminist research or that carried out by minority or indigenous groups. An emphasis on gender, ethnicity, and class must be fundamental to all educational and employment studies, even though we know that it is very difficult both to conceptualize and to carry out - it complicates and frays the edges of previously straightforward, taken-for-granted methodologies and findings, and raises the difficult question of who should carry out such research.

For example, Linda Smith (1992, p. 35) claims that, in the 1990s, we cannot assume that the lives of all Maori women have been shaped by the same kinds of forces; that one cannot romanticize the life circumstances of women who legitimately call themselves Maori and assume that these women fit an idealized Maori template. Research into these areas is difficult, for both Maori and Pakeha. She also makes the point that Maori are beginning to reject even Maori initiated research in some areas because there is widespread cynicism about the uses to be made of the results, i.e., whether these results will benefit the people who are the subjects of that research.

Third, this research needs to acknowledge that the relationship of women to further education and the labour market is an inherently political process (Thompson, 1983, p. 4). Unless that acknowledgment is embedded in the assumptions that underpin research in this area, all that we will get will be sterile technical descriptions of sites that carry little meaning and no power for change:

> *This implies at least an equal share in its control, at least an equal share in the determination of what counts as valuable knowledge within it, and at least an equal recognition that what is important about women's experience of the world is as valid as men's. Without such real equalities, notions of 'equality of opportunity' are essentially rhetorical.*

Fourth, how can we carry out research that is useful to adult educators and their female students? Following the international expansion in adult education provision, there have been signs of an increase in adult education research (Long, 1992, p. 83). What are the research questions that relate specifically to adult educational practice? [20] Do these arise directly from that practice or are they prior questions about the relationship between education and the labour market? If the former, how can we ensure that these questions do not lead only to descriptive studies; that they enable the development of a theoretical impetus for further research? If the latter, how can the answers affect what tutors do on Monday morning; how can they affect the ways in which female students frame, develop and change their lives?

Fifth, Spender asserts that a profound attention to "gatekeeping" should be at the core of educational research and scholarship; that educational research should focus primarily on the processes and effects of gatekeeping - how it works and who and what is let in and kept out at all levels of education (and, I would add, the labour market). This issue is closely related to research which examines the gender/ethnicity/class linkage and the political siting of women in education and employment referred to above.

Once research is firmly focused on gatekeeping, then it will be able to attend to issues of difference, of absence and of power.

Who does this research? How is it carried out? How is it supported as a fundamental activity of educational and labour market research? In sum, as researchers we must look for difference and account for it and, as practitioners, we must provide for difference in our programs and pedagogies.

Sixth, how do we ensure that resources and power are given over to indigenous peoples, particularly women, to determine their own research agenda and methodologies, and to carry out their own research to their own ends?

Conclusion

Lynne Segal said in 1987 that,

> *If we want to see how we as women can choose to change our lives we must jettison all our notions of unchanging predetermining forces which seal our fate: whether written in the stars or stemming from the fixed values of men. We need instead to focus our attention on the possibilities and significance of the here and now. For it is only in locating the changing and contradictory forces of the present moment, seen for instance in the uneven and unequal progress in the lives of women, that we find the pressure points which suggest how we might work for further change* (1987, p. 205).

I feel that we are in the balance: New Zealand has a long history of fair play, of commitment to social good and public (that is, state) support of those groups and individuals who are disadvantaged. This is a history that we have taken for granted and been rightly proud of. Some will claim that, after nearly eight years of unrelenting implementation of monetarist policies under both a Labour and a National government, we have already tipped that balance in favour of the wealthy and the advantaged.

However, I believe that we are still opening up possibilities and chances. For those of us who have daughters, we send them out into a world that is filled with more opportunities and choices for women than could have been envisaged even 20 years ago; opportunities and choices that are underpinned by a solid structure of demonstrable achievement by women. Yes, there are many areas where this is still token, but we have to look seriously at the real advances that have been made in women's employment and educational opportunities since the 1960s and see them as part of a progressive achievement; that is, they are built on hard work that must continue.

We also send our daughters out into a world where the gap in life chances between certain groups of women is growing: between middle class and working class women, between first and third world women, between dominant culture and indigenous women in colonised countries; a world where there are not only opportunities but also risks and challenges and almost insurmountable obstacles. The hard work of creating first class opportunities for women in education and employment must encompass and bridge this gap.

In a year that celebrates internationally the centenary of women's suffrage in Aotearoa/New Zealand, and in a year designated Indigenous People's Year by the United Nations, we need to look closely at choices in employment and education and the life chances of all women.

E nga wahine, kia kaha, kia kaha ra. No reira, kia ora koutou katoa. (*Women, be strong, be steadfast. Finally, good health to you all.*)

References

American Association of University Women (1992) *How Schools Shortchange Girls: Executive Summary of a Study of Major Findings on Girls and Education*. Washington, DC: AAUW Educational Foundation.

Boston, *et al.* 1991.

Du Plessis, R. (1992) Stating the contradictions: The case of women's employment. In R. Du Plessis (Ed.) *Feminist Voices: Women's Studies Texts for Aotearoa/New Zealand*. Auckland: Oxford University Press, 209-223.

Dwan, S. & Smith, K. (1990) *EEO Training Kitset*. Christchurch: University of Canterbury.

Education and Training Support Agency. (December 1991) *Report on the Government's New Industry Skills Training Strategy*. Wellington.

Hawke, G. (1988) *Report of the Working Group on Post-Compulsory Education and Training*. Wellington: Government Print.

Hyman, P. (1992) The use of economic orthodoxy to justify inequality: A feminist critique. In R. Du Plessis (Ed.) *op. cit.*, 252-265.

Kaua, W. (1992) Maori education to support the distinctive and unique place of Maori. *Parent and School*. November/December, 44-45.

Lankshear, C. (1990) Illiteracy, improper literacy and the development of an underclass. In H. Lauder and C. Wylie (Eds.) *op. cit.*, 175-196.

Lauder, H. & Wylie, C. (Eds.) (1990) *Towards Successful Schooling*. London: The Falmer Press.

Lauder, H. (1990) Education, democracy and the crisis of the welfare state. In H. Lauder and C. Wylie (Eds.) *op. cit.*, 33-52.

Long, H. (1992) University adult education research in the United States. *International Journal of University Adult Education*, 21(3), 66-89.

McQueen, H. (1992) *A Quality Partnership: The Transition between Education and Employment*. Wellington: Victoria University of Wellington Institute of Policy Studies.

Marshall, R. and Tucker, M. (1992) Building a smarter work force. *Technology Review*, October, 52-60.

Mason, R. & Rendell, S. (1992) The future of adult education in Australia: Facing the educational challenge. *Australian Journal of Adult and Community Education*, 32(3), 178-181.

Middleton, S. & Jones, A. (1992) *Women and Education in Aotearoa*. (Second Edition). Wellington: Bridget Williams Books.

Munford, R. (1992) Caregiving: The invisible work of women. In C. Briar, R. Munford & Nash M. (Eds.) *Superwoman, Where are You?: Social Policy and Women's Experience*. Palmerston North: Dunmore Press, 82-103.

Nash, R. (1987) Education between school and work. In W. Korndörffer (Ed.) *Transition: Perspectives on School-to-Work in New Zealand*. Palmerston North: Dunmore Press, 29-41.

Nash, R., Harker, R. & Durie, A. (1992) *Access and Opportunity in Education: Phase 2 - Interviews with Parents*. Report to the Ministry of Education, Contract No. 41/17/239. Palmerston North: Educational Research and Development Centre, Massey University.

Ngahana-Hartley, G. (1992). A fair deal for Maori in tertiary education: A Maori woman's view. *ASTE in Education* November, 7.

O'Neill, A. M. (1990) Gender and education: Structural inequality for women. In J. Codd, R. Harker and R. Nash (Eds.) *Political Issues in New Zealand Education*. (Second Edition). Palmerston North: Dunmore Press, 74-98.

O'Regan, M. (1992) Daring or deluded?: A case study in feminist management. In R. Du Plessis (Ed.) *op. cit.*, 197-208.

Peters, M. C., Peters, M. A. and Freeman-Moir, J. (1993) New Zealand Universities and State-Owned Enterprises: Is there any difference? *AUSNZ Bulletin* 10. Wellington: Association of University Staff New Zealand.

Research Unit for Maori Education (1992) *Annual Report to March 31st, 1992 - Te Tari Rangahau o Te Matauranga Maori*. University of Auckland.

Royal Commission on Social Policy (1988). *The April Report*. Wellington: Government Printer.

Roth, M. (1993). *Women and Work: Study Guide 1*. Centre for Continuing Education, University of Auckland.

Scott, H. (1984) *Working Your Way to the Bottom: The Feminization of Poverty*. London: Pandora Press.

Segal, L. (1987) *Is the Future Female? Troubled Thoughts on Contemporary Feminism*. London: Virago Press.

Smith, G. (1990) The politics of reforming Maori education: The transforming potential of Kura Kaupapa Maori. In H. Lauder and C. Wylie (Eds.) *op. cit.*, 73-87.

Smith, L. (1990) *Mana Wahine - Mana Maori: A Case Study*. Report for the Maori Education Research and Development Unit, Education Department, University of Auckland (July).

Smith, L. (1992) Maori women: Discourses, projects and mana wahine. In S. Middleton and A. Jones *op. cit.*, 33-51.

Sowell, T. (1989). Affirmative action: A worldwide disaster. *Commentary*, December, 21-41.

Spender, D. (1992) The entry of women to the education of men. In C. Kramarae and D. Spender (Eds.) *The Knowledge Explosion: Generations of Feminist Scholarship*. New York: Teachers College Press, 235-253.

Taking Liberties Collective (1989) *Learning the Hard Way: Women's Oppression in Men's Education*. London: Macmillan.

Te Awekotuku, N. (1991) *Mana Wahine Maori: Selected Writings on Maori Women's Art, Culture and Politics*. Auckland: New Women's Press.

Thompson, J. (1983) *Learning Liberation: Women's Response to Men's Education*. London: Croom Helm.

Travers, B. (1992) *Women and TAFE: Recognition of Prior Learning: Implications for Women*. Canberra: Department of Employment, Education and Training.

Endnotes

1 Lauder and Wylie (1990, p.xi) provide a useful description of the status of the *Treaty of Waitangi*: "[This is a] *Treaty* between Maori chiefs and the British government signed in 1840, which sets out the terms of a partnership between Maori and the Crown in which Maori acknowledged the sovereignty of the British Crown in return for its protection in 'unqualified exercise of their chieftainship over their lands, villages and all their treasures' (Maori version). Treasures (taonga) are now recognized to include culture and language. Maori attempts to invoke the Treaty in the face of the rapid appropriation of Maori land and culture were largely unsuccessful until the formation of the Waitangi Tribunal in 1975. This Tribunal can make recommendations on claims relating to the practical application of the principles of the *Treaty*. By 1986 there was some Pakeha acceptance that the *Treaty* established a partnership whose terms had been broken by Pakeha. The issues relating to the *Treaty* are still contentious but the Labour government had accepted that 'all future legislation referred to cabinet at the policy approval stage should draw attention to the practical applications of the *Treaty of Waitangi*'.

2 Lauder provides a full description and analysis of New Right government policies and their potential effects in New Zealand (1990, pp. 33-52).

3 "The purpose of the State Owned Enterprises Act 1986 (SOEA) was to restructure the environment and management practice of Government departments such that they would emulate commercial practice in the private sector. Under the SOEA, for example, state corporations are regulated by company law and are required to be as profitable and efficient as their private sector counterparts. In order to help SOEs become more profitable and efficient, the Labour Government reduced funding and, where possible, increased or introduced charges for the users of Government services" (Peters, Peters & Freeman-Moir, 1993, p. 4).

4 As I write this, I am watching an item on the evening news about public hospitals in New Zealand employing debt collection agencies to recover the millions of dollars owed by people who have simply refused to pay their accounts since 'user-pays' was introduced a year ago. A man who has not paid his hospital bill (and has no intention of doing so) articulates a viewpoint held by many New Zealanders when he says, "My access to free health care is part of a personal right. I pay my taxes".

5 "More than half of Maori households are headed by a single Maori woman. A range of social indices places Maori women in an ongoing tenuous social and economic position. The April 1991 changes in benefit structures have placed a further disproportionate burden on Maori women and on Maori children" (Smith, 1992, p. 45).

6 Not all New Zealanders held these ideas about the operation of the labour market, of course - but there was a substantial national myth, based on decades of relatively high wages and good, safe working conditions in most sectors, that the labour market was fair and that inequities were anachronisms which were gradually being overtaken by enlightened industrial relations between employers and employees as equal partners in enterprise.

7 Figures released for December 1992 as an unofficial measure of unemployment (that is, the numbers of unemployed registering with the Labour Department) showed an increase of 13,378 to a total of 235,755. However, figures released a few days before I left for this conference indicate a slowing in the rate of increase of unemployment: in January 1993, the unofficial measure of unemployment produced a total of 233,266.

8 "[The] distinct character of women's poverty has two sources: women bear the major responsibility for childrearing; and women's income and economic mobility are limited further by occupational segregation, sex discrimination and sexual harassment. The two are, of course, closely related" (Scott, *op. cit.*, p. 23).

9 "In 1988, the Labour Government required all educational institutions to incorporate in their charters broad objectives and specific goals for bringing about equal opportunities for all individual students and for promoting the educational advancement of targeted groups, such as females, Maori and pupils from low socioeconomic status backgrounds. However, in October 1990, the newly elected National Government announced that it intended to make such policies and provisions optional" (Middleton & Jones, 1992, pp.vii-viii). The May 1989 school charter guidelines detailed the various groups to be covered by the equal opportunity and anti-sexual harassment programmes, as well as requiring school boards of trustees to enhance learning by ensuring that the curriculum, defined very broadly, was non-sexist and non-racist (*ibid.*, pp. 4-11).

10 The Report of the Working Group on Equal Employment Opportunities and Equal Pay, *Towards Employment Equity* (1988) Government Print, Wellington, provided the basis for this legislation.

11 For example, the Women and Girls Section of the Ministry of Education has been abolished recently and the Ministry of Women's Affairs has been threatened with extinction on several occasions. The Education Review Office, which monitors the implementation of equity in the education sector (among other tasks), has been restructured and downsized several times since its inception in 1990 - this has affected its capacity to carry out equity monitoring.

12 "... the National Government has decided to impose a capital charge or 'asset tax' on tertiary institutions. From 1 January 1995, the new charge is supposed to iron out any competitive advantages that asset-rich institutions might have over their poorer counterparts. Furthermore, it is supposed to ensure that institutions use their capital assets more efficiently by putting in place incentives which are similar to those experienced by [private] enterprises" (Peters *et al*, 1993, p. 5). I was a member of one of the Labour Government's Ministerial Working Parties on Learning for Life and can attest that these notions were tabled regularly by the Treasury and State Services representatives. National's policies simply build on the foundation laid by a Labour Government.

13 Travers, 1992, has provided a useful study on the ways in which recognition of prior learning can be assessed and utilised in the certificatory process.

14 See the *Report on the Government's New Industry Skills Training Strategy*, December 1991. A range of other developments aimed at keeping young people in school or further education or training have been put in place: Link programmes between secondary school and further education have been developed (with varying degrees of success); work shadowing through the Teacher Placement in Industry project has been initiated; the school leaving age will be raised this year from 15 to 16 years of age; and there is a focus on a schools/industry partnership, particularly on increased employer funding and control of training provisions.

15 One important related factor in this access has been the provision of the Training Incentive Allowance to people on social welfare benefits, particularly those on Domestic Purposes Benefits (i.e. single parents who are not in paid employment). This allowance provides NZ$21.28 per week for eligible students, which can cover the cost of enrolment fees, and up to NZ$51 per week if the student claims hardship. There is also social welfare assistance provided with childcare fees and the cost of materials and books for courses. In addition, students may borrow up to $1,000 to defray the costs of study.

16 "Children whose parents, as survivors of an assimilationist school system, had almost completely missed out on that truly great treasure that makes the Maori unique - te reo rangatira, our own voice - are learning to speak, to dream, to write, to laugh, in the first language of these islands. A colossal success which has been adopted by other indigenous peoples with languages at risk, Te Kohanga Reo still challenges the colonizing, mono-cultural bias of mainstream education, and women, Maori women, are steering this extraordinary canoe, opening the way" (Te Awekotuku, 1991, p. 12).

17 "Kura Kaupapa Maori are primary school initiatives based on Maori philosophy and Maori principles of teaching and learning. Kaupapa Maori philosophy takes for granted the validity and legitimacy of Maori knowledge, pedagogy and cultural practice. It asserts the **right** of the taangata whenua (indigenous people) and their culture to exist and to continue to flourish in Aotearoa. Of central importance is the revival and survival of spoken Maori language. These schools use **total immersion** methodology, teaching and learning wholly through Maori language" (Smith, G., 1990, pp. 77-78).

18 "In schools, in July 1992, 8862 students were enrolled in Maori medium education programmes providing greater than 51% te reo Maori content (kura kaupapa Maori 510; primary 701; composite 260; secondary 985). These numbers are increasing as more Maori parents choose to enrol their children in Maori medium education" (Kaua, 1992, p. 44).

19 A recent news report claims that up to 10,000 Maori students are expected to get grants from the Ministry of Maori Development this year to help pay their tertiary tuition fees. The Manaaki Tauira scheme pays up to 90% of a student's fees or a maximum of $1250. Students have to show written evidence of enrolment at a university, polytechnic, college of education or wananga and be endorsed by iwi or Maori authorities. Maori students are also eligible for assistance from the Maori Education Foundation. (*The Evening Post*, 10/2/93, p. 2.)

20 For example, Brian Findsen claims that a fundamental issue in adult education relates to the provision/participation nexus. The ratio of women to men's participation in adult education is 2:1, yet we have to ask where the women's voice is in adult education provision; where are women's constructs, women's pedagogies and methodologies and women's research paradigms (personal communication - 1993).

Education and Jobs: A Proactive View

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Introduction

Ever since the publication of *Nation at Risk* by the National Commission on Excellence in Education in 1983, American educational policy and reform has been dominated by economic considerations. That report and others have argued that the ability of the US to succeed in international economic competition will depend crucially on our ability to raise academic requirements and test scores to levels that equal or exceed those of our competitors. More academic courses, rigorous examinations for high school graduation, and longer school days and school years have been recommended as ways of improving test scores to make the nation economically competitive.

These assertions have been so convincing to the public at-large that there has been little call for evidence. It is simply assumed that much of the economic challenge has education at its roots and that more education and higher test scores will solve the problem. This view has been challenged only recently (e.g., Levy & Murnane 1992; Johnston 1993). In this paper, I will evaluate two prominent claims on which much educational policy is based by looking at the evidence that supports them. These include: (1) jobs at the turn of the century will require considerably more education than those in the mid-eighties with rising skill shortages; and (2) substantial increases in test scores are likely to have powerful impacts on productivity. These two assumptions lie at the base of most calls for educational reform in the US. I will conclude with the view that even an economic concern with education should be more concerned with contributing to the development of capable human beings than with narrow - and largely misunderstood - economic imperatives.

Rising Educational Needs

The assertion of rising educational needs in the work force stems from two claims. The first is that the educational requirements of existing occupations are being rapidly upgraded because of the application of microprocessors and computers to these jobs. The second is that there is a rapid shift in occupations from ones requiring little education to technical and professional jobs that require considerable education.

Upgrading of Existing Occupations. It is commonly observed that the rising use of computers and other new technologies in many occupations must be raising the skill requirements of those occupations (Botkin *et al.* 1984: 80).

But, most persons who use computers in their jobs require no special computer skills. For example, warehouse clerks and supermarket checkout staff typically use a computer read-out device to read bar-codes on products as they are purchased, sold, shipped and received. The use of this device requires no knowledge of computers. Nor do bank tellers, word-processing operators, airlines reservation agents, and many other occupational groups who use computers need special computer skills. At most a person in these occupations has had to acquire knowledge of new procedures and equipment, often with the equipment reducing the skill requirements of the job with its

rapid information retrieval and computational power. Goldstein and Fraser (1985) found that most workers who use computers in their jobs utilize standard software packages that require little previous education or training.

Reviews of studies on the impact of technologies on skill requirements reach the conclusion that past technologies have tended to raise skill requirements of some jobs and lower those of others with an overall effect of little or no change in the aggregate (Spenner 1985, 1986; Rumberger 1981, 1987; Flynn 1988). Capelli (1993) found some evidence of a rise in the skill requirements of production jobs between 1978 and 1986, but these affect a declining share of the workforce. Although manufacturing jobs accounted for 27% of all non-agricultural jobs in 1970, they had declined to only 17% of such jobs by 1990. Of the clerical jobs that Capelli examined, half experienced upgrading and half experienced downgrading. After reviewing the evidence on the impact of technology on skill requirements, the National Research Council concluded:

> *the empirical evidence of technology's effects on skills is too fragmentary and mixed to support confident predictions of aggregate skill impacts. Despite this uncertainty, however, the evidence suggests that the skill requirements for entry into future jobs will not be radically upgraded from those of current jobs* (Cyert & Mowery 1987: 103).

That is, there is little evidence of dramatic shifts in the skill requirements (and presumably educational requirements) of jobs as a result of changes in technology.

Of much greater potential consequence than technology - but perhaps made possible by changing technology - are changes in the organization of the workplace in the direction of "High Performance Work Organizations" (Osterman 1992). These workplaces would raise productivity by providing opportunities for worker decision-making at both individual levels and in teams with considerable access to information and discretion in the allocation of resources (Levin 1987). Such work organizations tend to raise productivity by capitalizing on the education and training of workers to a greater degree than traditional work organizations (Office of Technology Assessment, US Congress 1990). On the basis of a survey, the Commission on the Skills of the American Workforce (1990) claims that only about 5% of the US workforce is found in that type of workplace. Such workplaces require not only the establishment of participative work organizations with less hierarchy, but secure employment and considerable investment in worker training and retraining, when needed.

A far more evident trend in the US economy has been the tendency to hire "disposable workers", temporary, contract and part-time workers with neither job security nor worker benefits and little investment in training. A recent estimate of the US Department of Labor suggests that in 1992 these types of jobs accounted for about half of all new employment, up from a quarter of new jobs just ten years previously (Kilborn 1993). Workers with so little tenure in the workplace are unlikely to be given the training or employment growth opportunities associated with the "High Performance Work Organization" of work teams, multi-skilled workers, worker participation in decisions, broader skills, and high investments in worker training. While a shift to more high performance work organizations could create demands for new and higher order skills in workers, a part-time, temporary, and contract work force has the opposite implications. Such workers receive little or no training or skill development because of their very tangential attachments to the firm. Unfortunately, the available evidence suggests that it is the disposable worker phenomenon that is winning the race at the present time.

Upgrading of Occupations. Even if there is little evidence that existing jobs are changing dramatically to require more education, it is possible that the economy is shifting jobs out of low-skill occupations to jobs in high-skill occupations. Jobs in manufacturing, mining, and agriculture that have required high school graduation or less have been declining. But, what is taking their place? The US Department of Labor has made projections of occupational positions from 1986 to the year 2000 (Silvestri & Lukasiewicz 1987). These projections were analyzed for their educational implications by Levin and Rumberger (1989).

Projections were divided between the top ten occupations in terms of percentage rates of growth and the top ten occupations in terms of the absolute numbers of new jobs. Occupations with high percentage rates of growth may not add many very many new jobs if their initial employment base is small. Conversely, occupational categories with lower rates of growth may add large numbers of new jobs if their initial employment base is large. The ten fastest growing occupations in percentage rates of growth tended to be in jobs requiring fairly considerable education, at least some higher education. Paradoxically, only two of these occupational categories were primarily associated with technology: data-processing equipment repairers and computer systems analysts. In contrast, six of the ten were associated with the health care industry: medical assistants, physical therapists, physical and corrective therapy assistants, home health aides, podiatrists, and medical-records technicians. It should be noted that the health care industry is on the brink of extensive restructuring, and its growth may be curtailed by national health care reform. Because of the small employment base of these occupations, the ten occupations with the largest projected percentage increases were expected to provide relatively few jobs. With a growth rate four times the average for all occupations, they were expected to generate only about 778,000 new jobs or less than 4% of all new jobs.

These analysts also examined the ten occupational categories that were expected to account for the largest total or absolute numbers of new jobs. These occupations included primarily occupations at the low end of the skill distribution such as sales clerks, waiters, janitors, cashiers, truck-drivers, office clerks, food-counter workers, and nurses aides and orderlies. Only two of the ten fastest-growing occupations in terms of absolute job growth required any education beyond high school. The top ten jobs in terms of absolute projected growth had a very large employment base in 1986. Thus, even with lower rates of percentage growth, these jobs requiring relatively low education were expected to generate an increase of over 6 million new jobs or almost 30% of the total of new jobs expected.

In summary, the ten fastest growing occupations in relative or percentage rates of growth clearly require above-average education, but were expected to account for less than 4% of new jobs between 1986 and 2000. The ten fastest growing occupations in terms of absolute numbers of jobs require below-average education, but were expected to contribute almost one-third of the new jobs in that period. However, with almost 500 occupations, a comparison limited to the fastest growing ones may be unrepresentative of the total job distribution.

Accordingly, Levin and Rumberger (1989) compared the distribution of education embodied in the occupational distribution for 1986 and with that in the projected occupational distribution for the year 2000. The analyses were done separately for each of the several hundred detailed occupational classifications and combined into educational distributions for the purposes of comparison. In order to estimate educational requirements for the two occupational distributions, we assumed that the educational requirements for specific occupations would be similar over the fourteen year period, consistent with the earlier discussion on changes in occupational skill requirements.

Perhaps the most notable finding from this analysis was that despite major projected shifts of occupations between 1986 and 2000, the educational requirements of jobs turn out to be remarkably stable with only a slight upgrading. Although the new jobs added to the economy over this period will require higher educational levels than current jobs on the average (Johnston & Packer 1987), the overall educational requirements for jobs in the year 2000 are likely to be quite similar to those at present. For example, while 48% of jobs in 1986 required high school completion or less, that figure declines to only 46% for the year 2000. While 21% of jobs required college completion of a four-year university degree or more in 1986, the figure rises to only 23% in the year 2000. This conclusion of very modest educational upgrading corresponds closely with the judgements of the Panel on Technology and Employment of the National Research Council (Cyert & Mowery 1987). The Commission on Skills of the American Workforce (1990) has also recognized the slow change in educational requirements of the work force and has called for the creation of more high-productivity jobs in the future to more fully utilize education in the labor

force. Unfortunately, there is little evidence that this call has been heeded in the national downsizing and restructuring that is taking place.

Demand for University Graduates. Others have emphasized that the incomes of university graduates have risen considerably relative to high school graduates (Johnston & Wirt 1992:45). Therefore they argue that there is a rapidly rising demand for university graduates relative to the available supply. It is true that the university graduate earnings premium has risen dramatically relative to the earnings of high school graduates. For example, among 25 to 34 year old males in 1968, the average income of high school graduates was about US$24,166 in comparison with average income of US$30,568 for university graduates (both in 1987 dollars) (Levin & Kelley, forthcoming). Thus, university graduates in this group had about a 27% advantage over high school graduates. By 1987 that advantage had risen to 50%.

But, what is lost in this analysis is that the incomes of university graduate males *declined* between 1968 and 1987 by about 10 percent in constant (1987) prices. Declining real prices of university graduate labor services are hardly a signal of shortage or scarcity. The only reason that the university graduate wage premium rose so dramatically was that there has been an even greater decline of earnings for high school graduates. The result is that the ratio of earnings for university graduates to that of high school graduates has risen, but both have experienced declining fortunes rather than rising ones. In fact the US Bureau of Labor Statistics found that over the same period, one out of five university graduates had to settle for jobs that do not require university degrees for entry, and the proportion is expected to rise in the future (Hecker 1992; Shelley 1992).

Summary of Educational Needs. The most accurate prognosis consistent with the evidence is that there is evidence of slightly rising educational needs in the labor force for the foreseeable future. However, educational accomplishments of the labor force are also rising, so there is little indication of a skills gap. Indeed, the present forecast of job opportunities for university graduates is not a rosy one (Shelley 1992). Although both technology and new forms of work organization could dramatically alter this pattern, there is little concrete evidence at the moment of any precipitous change in the offing. Several observers have argued that the resurrection of the economy will require a shift of workplaces to more productive organizations that would more fully utilize education and technology (Levin 1987; Office of Technology Assessment, US Congress 1990; Commission on the Skills of the American Workforce 1990). However, that call has not been met by anything approaching a national mobilization. Indeed, the rise of the disposal worker phenomenon of part-time, temporary, and contract workers suggests the opposite. On the basis of the present evidence, it does not appear that there will be serious shortages of educated workers for the foreseeable future.

Test Scores and Productivity

A somewhat different contention is that the reason for economic stagnation in the US over the last two decades is that the test scores of our students are considerably lower than students in Japan, West Germany, and other countries that we are competing with (Bishop 1989). Many of the educational reforms are predicated on raising student test scores to the levels that will make our work force competitive internationally. This argument is so logical that there have been few attempts to examine the evidence on which it is predicated.

There are at least three types of evidence that could be examined. First, how productive are the US plants of foreign enterprises (e.g., those of Japan) when they set up factories in the US using the existing US work force? Second, what is known about the relation between test scores and worker productivity as estimated in studies of workers by industrial psychologists? Third, what is the relation between worker test scores and earnings?

Productivity of Japanese Plants in US. Virtually all of the major Japanese automobile producers have established manufacturing plants in the US using the local workforces in the areas where the plants are situated. Comparisons of product quality and worker productivity have been made between these plants and their Japanese counterparts. For example, Honda has both automobile and motorcycle assembly plants in

Ohio employing more than 10,000 workers. The Honda Accord that is produced there is not only one of the best-selling cars in the US, but it is also being shipped to 18 countries including Japan and Europe ("Honda: Is It An American Car"? 1991). According to the President and CEO of Honda, "... the quality of cars produced in Ohio is superior to those made in Japan" (Castillo 1991).

Substantial research has been carried out on the productivity of the joint venture of General Motors and Toyota called NUMMI in California (Brown & Reich 1989; Krafcik 1986; New United Motor Manufacturing, Inc. 1991). That plant is run by Toyota and produces the Geo Prizm (comparable to the Toyota Corolla) and Toyota pickup trucks. It was forced to hire most of its workers from the laid-off work force of a former General Motors assembly plant that was considered to be the worst in the GM system. Despite its "inadequate" labor force, productivity in the plant was 50% higher than in the old GM plant and equal to that of its sister plant in Takaoka City, Japan with quality equal to that of the imported Toyota Corolla (Krafcik 1986).

Of course, the Toyota system of production, training, and employment security is considerably different from that in most US auto plants. NUMMI uses a just-in-time system of inventory and an emphasis on 100% quality in all assemblies with highly trained workers organized in teams. Emphasis is on worker flexibility and involvement in the work process. Employment security is high, and worker training is extensive and continuous. Nissan, Mazda, and Toyota (under its own name) have also established highly productive and profitable automobile assembly plants in the US. The high productivity of these plants and its favorable comparison to plants in Japan seems to have less to do with the test scores of their workers than with better management practices and more efficient work organizations.

Test Scores and Supervisory Ratings. Industrial psychologists have long maintained that cognitive tests and other employee characteristics are good predictors of worker productivity (e.g., see Schmitt, Gooding, Noe & Kirsch 1984). The most researched test that has been used is the General Ability Test Battery (GATB) which has been used by the US Employment Service to refer job candidates to prospective employers. The simple correlation of GATB with supervisory ratings of employees among different jobs is on the order of .25, even when adjusted for sampling error and reliability according to a study of the research literature on GATB by the National Research Council (Hartigan & Wigdor 1989). This result is also consistent with reviews of studies using other test score measures (Schmitt, Gooding, Noe, & Kirsch 1984). This implies that only about 6% to 7% of the variance in observed productivity by supervisors is associated with test scores, hardly a solid base for suggesting that future labor force productivity will depend crucially on increases in student achievement.

Test Scores and Earnings. Several decades of research have shown only a limited connection between tests scores and earnings for workers at a given level of education. For example, a rise from the 50th to the 84th percentile has typically beeen associated with only a 3% to 4% gain in earnings (Bishop 1989). Recent empirical work by Murnane, Willett, and Levy (1993) found that the relation has become more important in recent years, but it remains small. They found that the wage difference associated with a one standard deviation difference in mathematics test scores among high school graduates who did not go on to university went from about 3% in 1978 to 7.4% in 1986 for males and from 8.5% to 15.5% for females.

One way of gauging the potential policy importance of this relation is to ask about how test score gains associated with major schooling interventions would translate into higher earnings. For example, Coleman and Hoffer (1987) found that high school seniors in Catholic schools gained about .06 standard deviations in test scores more than public school seniors between their sophomore and senior years. This "private school advantage" has been much discussed and has been used as one of the major arguments for pushing for educational vouchers to improve American education. But, this test score advantage translates into an increase in earnings of only about 4 cents an hour.

Since real wages and annual earnings fell in the US over the '70s and '80s, we might explore how rising test scores might have reversed that

trend. Murnane, Willett, and Levy calculated that the average wage for high school graduate males not going on to college in the 1978 group was US$9.49 an hour in 1988 dollars, an average that fell to US$7.92 an hour for similar males in 1986. That meant that a 1986 male whose test score was one standard deviation above the mean in 1986 would have been earning about one dollar an hour *less* than the *average* 1978 male and about 75 cents an hour *less* than a 1978 male who was one standard deviation below the average. That is, a male in 1986 who was in the 84th percentile on the mathematics test was earning about 8% *less* than one who was only at the 16th percentile in 1978. This hardly suggests that a dramatic rise in test scores over that period would have turned around the economy or raised national incomes substantially.

The empirical evidence from employer studies suggests that workers do need to meet a minimum threshold of achievement in order to perform adequately on the job. There is no precise agreement on what this threshold is, although a National Research Council report is informative (National Academy of Sciences 1984). It suggests that competence in computational skills, communication skills, and reading skills should be required of all workers. Based upon the work of Murnane, Willett, and Levy (1993), Levin, Rumberger, and Finnan (1990), and Brown, Reich, and Stern (1990), it appears that basic skills at the eighth grade level would meet these criteria. For example, Brown, Reich, and Stern (1990) report on a very successful, multi-national, electronics firm that set minimal test scores for hiring that are equivalent to a seventh grade level in reading and fifth grade in mathematics. Further, they report that the test score performances of employees did not correlate with "team skills" and "work habits", two important ingredients of productivity in that firm.

While a solid eighth grade achievement as a threshhold is hardly a high level of achievement, it is not a level being achieved by perhaps one third of present US students, so called at-risk students (Pallas, Natriello, & McDill 1989). Such students are especially concentrated among minority and immigrant families and those in poverty, groups that represent an increasing proportion of the total student population and accounting for a disproportional share of high school dropouts. They have considerably lower test scores than other students, and many have levels of achievement that probably do not meet the threshold that is necessary for stable employment, additional training, and occupational mobility. Getting students from at-risk backgrounds to become academically able is a major challenge that should also improve their labor force prospects. Moreover, a good educational argument might be made for greater cognitive growth among students at all levels. However, the direct evidence that general increases in test scores of high school graduates will have a profound effect on economic productivity or earnings is weak unless we are able to create more productive workplaces that will fully use these skills.

A Proactive Stance

Given the failure of existing evidence to support the contention that a more educated workforce with higher test scores will lead to much greater productivity and an economic resurgence, what types of educational policies should be pursued for preparing students for work? The fact of the matter is that we have almost no direct information on how different educational characteristics of workers beyond a minimum set of skills can have a powerful impact on worker productivity and success. This is a particular shortcoming for those who believe that it is the responsibility of schools to respond mechanically to the educational requirements of the workplace. Our knowledge base is inadequate to specify what these requirements are. Further, in a world of rapid change and increasingly intense competition in which technologies, enterprises, goods, and services flow quickly across international boundaries with potentially profound effects on domestic workplaces, it is likely that changes in workplace demands may happen quickly and with unpredictable consequences.

In contrast, reports like *Nation At Risk* presume that educational requirements of the workplace are known and that the consequences of economic change are highly predictable. Accordingly, they suggest that responding to workplace needs is a matter of great urgency, following a long tradition of those who view the most important role of schools as preparing students for jobs. Not only is this an incomplete and

questionable view of the purpose of schooling, but it is an impractical one in a world of unpredictable workplace needs.

These facts provide a basis for a more humane view of schooling in which education for citizenship and human development can be viewed as roles that are as important as preparation for economic participation. Instead of the schools pursuing a reactive stance towards trying to meet the putative needs of a single institution, the workplace, we now have the opportunity to view them as proactive institutions with a set of more unified goals. A proactive stance towards education means that we should view educational needs in a more general frame of what is required for human endeavor more broadly speaking rather than just workplace endeavor (Dewey 1966).

In a futuristic study of more democratic and participative workplaces, we observed potential needs for skills that we believe meet these broader-based criteria of both human development, citizen participation, and productive work (Levin, Rumberger, & Finnan 1990). That is, by focussing on one set of goals, we could also meet broader societal and human needs.

These goals and the educational consequences they suggest include:

- **Initiative** - possessing the drive and creative ability to think and perform independently. For schools this means a shift from teacher- and school-directed activities to more independent endeavors which students conceive, design, plan, and execute

- **Cooperation** - participating in constructive and goal-directed interaction with others. For schools this means greater emphasis on cooperative learning where rewards are provided for both engaging in cooperative process as well as for the outcomes of that process.

- **Working in groups** - interacting in work groups directed towards both short-term goals of efficient task or activity accomplishment and the long-term goal of group maintenance. For schools this would mean a shift from individual to group endeavors with emphasis on group discourse, commitment, and productivity.

- **Peer training** - having the ability to provide informal and formal coaching, advising and training of peers. For schools this would require greater use of peer tutoring and peer assistance among students, either within or across grades and subjects.

- **Evaluation** - capable of carrying out appraisal, assessment, and certification of a product, service, or experience. For schools this would require that students be given far more experience in evaluating and grading the quality of their own work and that of student colleagues.

- **Communication** - ability to use spoken, written, and kinetic communication as well as good listening, comprehension, and interpretive skills for receiving messages and sustaining an extended discourse. For schools this would require a fuller development of communication skills in both work and cultural contexts.

- **Reasoning** - generating and evaluating logical arguments including both deductive and inductive approaches. For schools this would require a shift from memorization and rote learning to learning activities such as debates and essays which require careful reasoning and demonstration of logic.

- **Problem-solving** - identifying problems, generating alternative solutions and their consequences, selecting an alternative, and implementing a solution. For schools this would require frequent learning opportunities in addressing and solving problems that are situated in everyday contexts as well as those drawing on particular subject-matter knowledge. Both uncertainty and ambiguity of information are important as opposed to textbook approaches that are characterized by artificial situations with precise information and a single correct answer.

- **Decision-making** - employing the elements of problem-solving on an on-going basis and in a decision-context. For schools this would mean contined practice in problem-solving in contexts in which decisions must be made.

- **Obtaining and using information** - deciding which information is relevant, knowing where to obtain it, obtaining it, and putting it to use. For schools this requires the establish-

ment of considerable information sources including traditional ones and those available in computerized data-bases and providing learning opportunities for using this information for decision-maing, problem solving, and reasoning.

- **Planning** - establishing goals as well as scheduling and prioritizing work activities. For schools this requires the regular assignment of projects which entail an overall conception, design, and deadline and a functional breakdown into phases and intermediate goals and timelines as well as strategies for meeting these criteria.

- **Learning skills** - possessing the cognitive and affective skills that facilitate the acquisition of new knowledge as needed. For schools this requires an orientation on how to assess new learning situations as well as the mastery of styles of learning and strategies that can be used to master different types of new knowledge.

- **Multicultural skills** - understanding how to interact productively with persons from other cultures in terms of language, communication styles, and different values. For schools this requires a study of foreign languages and cultures as well as experiences in interacting with other cultures and in honing human relations skills.

This is not a complete list. However, it differs from the more reactive approach of limiting workplace skills to those that are narrowly job-related. Instead, workplace requirements are placed in a more general framework that can also be viewed as responding to a wider range of human and societal needs. More than this, they also help to define the needs of human beings who are likely to be proactive in seeing ways to shape and improve the workplace and other social institutions rather than just accommodating their exigencies. Such a proactive human being is also more likely to join with others to create new enterprises and workplace opportunities rather than facing unemployment or the disposable worker phenomenon. This way of thinking may raise productivity and employment, but it also recognizes that our educational system must do more than just prepare workers (Carnoy & Levin 1985). Indeed, the Secretary's Commission on Achieving Necessary Skills of the US Department of Labor (1991) has recommended a number of competencies for workers that overlap with these goals. Paradoxically, if we see future shifts to more democratic and participative workplaces (Commission on the Skills of the American Workforce 1990; Levin 1987; Office of Technology Assessment, US Congress 1990), this type of education will probably contribute more to rising productivity than the traditional focus on test scores and more years of schooling.

References

Bishop, J. (1989) Incentives for learning: Why American high school students compare so poorly to their counterparts overseas. In Commission on Workforce Quality and Labor Market Efficiency, *Investing in People*, Background Papers, Vol. I. Washington, DC: US Department of Labor, 1-84.

Botkin, J., Dimancescu, D. & Stata, R. (1984) *The Innovators: Rediscovering America's Creative Energy*. New York: Harper & Row.

Brown, C. & Reich, M. (1989) When does union-management cooperation work? A look at NUMMI and GM-Van Nuys. *California Management Review, 31*, 26-44.

Cappelli, P. (1993) Are skill requirements rising? Evidence from production and clerical jobs. *Industrial and Labor Relations Review, 46*, 515-530.

Carnoy, M. & Levin, H. M. (1985) *Schooling and Work in the Democratic State*. Stanford, CA: Stanford University Press.

Castillo, C. (1991) Honda boss talks at GSB about 'world car' concept. *Campus Report* (Stanford University), *24* (November 13), 4.

Coleman, J. M. & Hoffer, T. (1987) *Public and Private High Schools*. New York: Basic Books.

Commission on the Skills of the American Workforce (1990) *America's Choice: High Skills or Low Wages!* Rochester, NY: National Center on Education and the Economy.

Cyert, R. M. & Mowery D. C. (Eds.) (1987) *Technology and Employment*. Washington, DC: National Academy Press.

Dewey, J. (1966) *Democracy and Education*. New York: Free Press.

Flynn, P. M. (1988) *Facilitating Technological Change*. Cambridge, MA: Ballinger.

Goldstein, H. & Fraser, B. S. (1985) *Training for Work in the Computer Age: How Workers Who Use Computers Get Their Training*. Washington, DC: National Commission for Employment Policy.

Hartigan, J. A. & Wigdor, A. K. (Eds.) (1989) *Fairness in Employment Testing: Validity Generalization, Minority Issues, and the General Aptitude Test Battery*. Washington, DC: National Academy Press.

Hecker, D. E. (1992) Reconciling conflicting data on jobs for high school graduates. *Monthly Labor Review, 115*, (July), 3-12.

Honda: Is it an American car? (1991) *Business Week* (November 18), 105-112.

Johnston, B. J. (1993) The transformation of work and educational reform policy. *American Educational Research Journal, 30*, 39-65.

Johnston, W. B. & Packer A. (1987) *Workforce 2000. Work and Workers for the 21st Century*. Indianapolis, IN: Hudson Institute.

Johnston, W. B. & Wirt, J. G. (1992) Changing skills in the U. S. work force: Trends of supply and demand. In G. E. Peterson and W. Vroman (Eds.), *Urban Labor Markets and Job Opportunity*. Washington, DC: The Urban Institute Press.

Kilborn, P. (1993) New jobs lack the old security in time of 'disposable workers'. *The New York Times* (March 15), A1 & A6.

Krafcik, J. (1986) *Learning from NUMMI*. An International Vehicle Program Working Paper. Cambridge, MA: Massachusetts Institute of Technology.

Levin, H. M. (1987) Improving productivity through education and technology. In G. Burke and R. W. Rumberger (Eds.), *The Future Impact of Technology on Work and Education*. New York: Falmer Press, 194-214.

Levin, H. M. & Kelley, C. (forthcoming) Can education do it alone? *Economics of Education Review*.

Levin, H. M. & Rumberger, R. (1989) Education, work and employment in developed countries: Situation and future challenges. *Prospects, 19*, 205-224.

Levin, H. M., Rumberger, R. & Finnan, C. (1990) Escalating skill requirements or new skill requirements? Paper prepared for the Conference on Changing Occupational Skill Requirements: Gathering and Assessing the Evidence, Brown University, Providence, RI (June 5-6).

Levy, F. & Murnane, R. J. (1992) Where will all the smart kids work? *APA Journal, 58*, 283-287.

Murnane, R. J., Willett, J. B. & Levy, F. (1992) The growing importance of cognitive skills in wage determination. Cambridge, MA: Harvard Graduate School of Education.

National Commission on Educational Excellence (1983) *Nation at Risk*. Washington, DC: US Government Printing Office.

National Academy of Sciences (1984) *High Schools and the Changing Workplace*. Washington, DC: National Academy Press.

Office of Technology Assessment of the US Congress (1990) *Competing in the New International Economy*. Washington, DC: Office of Technology Assessment.

Osterman, P. (1992) How common is workplace transformation and how can we explain who adopts it? Results from a National Survey, Draft, Cambridge, MA: Sloan School of Management, Massachusetts Institute of Technology.

Pallas, A. M., Natriello, G. & McDill, E. L. (1989) The changing nature of the disadvantaged population: Current dimensions and future trends. *Educational Researcher, 5* (June-July), 16-22.

Rumberger, R. W. (1981) *Overeducation in the U. S. Labor Market*. New York: Praeger.

Rumberger, R. W. (1987) The potential impact of technology on the skill requirements of future jobs. In G. Burke and R. W. Rumberger (Eds.), *The Future Impact of Technology on Work and Education*. New York: Falmer Press, 74-95.

Schmitt, N., R. Z. Gooding, Noe, R. A. & Kirsch, M. (1984) Meta-analyses of validity studies published between 1964 and 1982 and the investigation of study characteristics. *Personnel Psychology, 37*, 407-422.

Secretary's Commission on Achieving Necessary Skills, US Department of Labor (1991) *What Work Requires of Schools*. Washington, DC: US Department of Labor.

Shelley, K. J. (1992) The future of jobs for college graduates. *Monthly Labor Review, 115*, (July), 12-21.

Silvestri, G. T. & J. M. Lukasiewicz (1987) Projections 2000: A Look at occupational employment trends to the year 2000. *Monthly Labor Review, 110*, 46-63.

Spenner, K. I. (1985) The upgrading and downgrading of occupations: Issues, evidence, and implications for education. *Review of Educational Research, 57*, (Summer), 125-154.

Spenner, K. I. (1986) *Technological Change, Skill Requirements and Education: The Case for Uncertainty*. Paper prepared for panel on Technology and Employment, National Academy of Sciences.

Commentary and Synthesis

Stephen B. Lawton
The Ontario Institute for Studies in Education

The papers included in Volume I of the Proceedings of the 1993 Education and Work Conference at OISE, provide both integrative assessments and fine-grained analysis of the links between the two subjects. David Corson's Introduction, which focuses on the notion that work is a fundamental activity that is far broader in its meaning and importance than is implied by its often narrow conception as paid employment. As Corson suggests, "men and women are 'at work' whether that work is in the form of a job, a craft, a hobby, and act of caring, an act of taking responsibility. . . ." Work is an act of creation, of production - of leading a productive life. It is - or should be - an end in itself, not just a means to an end. Education, at it best, informs individuals of the paths they can take in living a productive life and provides them with the skills to do so.

Perhaps this humanistic view of work can be viewed as an accommodation, and opting out, from the rhetoric of global competition with its strong emphasis on education as a means to economic ends. Sir William Taylor implies as much when he speaks of the "burgeoning literature on changes in the concept of work", and alludes to the sacred bases of many teachers' continuing commitment to "relationships among people, rather than personal achievement or possessions . . . , a curriculum and pedagogy that stresses cognitive and aesthetic development, the importance of the inner life of meaning and feeling, rather than the virtues of success as a consequence of competitive action." These values, however, can serve to block adjustments of education to realities of the changing world and so they need to be integrated into a concept of education that is compatible with the contemporary world.

Wanda Korndörffer, in describing how New Zealand's educational system had been re-designed according to principles enunciated by neo-conservative economists, focuses on the impact of new educational and social polices on women. Her assessment reflects both pessimism and optimism. The pessimism derives from women's traditional roles as caregivers for the young and aged. As governments cut back on expenditures to cope with the global economic changes Taylor refers to, much of the burden of care that has been assumed by governments in recent decades is returned to women. Governments' emphasis on the paid economy effectively devalues the work done in the family and within the community. At the same time, reductions in social benefits compound the "feminization" of poverty. Yet the redesign of education, with its emphasis on accessibility, contestibility, and portability also breaks down traditional barriers which have excluded women, providing them with new opportunities.

Veronica Lacey's challenge to Canadian educators carries in it the views of the the current Canadian federal government's response to global challenges, as well as the North York Board of Education's own innovations to accommodate Taylor's Model C world. Douglas Stephens' complementary piece analyzes analogous issues from the perspective of the private sector. What is striking is both the similarity of analyses and the extent to which education has permeated the business sector while traditional business concerns - achievement, competition,

and quality - have permeated the education sector. Canada appears to be developing a greater awareness of the situation we face and the choices for action that we have, even while we are forced to change by events in our economic and social environments.

Both Lacey and Stephens agree that a key issue is the transition from school to work and its links to the provision of a technically trained, competent workforce who can serve and be served by our economy. The contributions by John Lewko and Carol Hein, and by Kaori Okano, scrutinize the transition process from different perspectives. Lewko and Hein are concerned about the transition to scientific careers. The pathways they identify indicate a hazardous trail on which the choices taken by many youth, especially young women, close off life options. Echoing both the concerns of Korndörffer and Taylor, these authors document the early age at which opportunities are foreclosed, often unknowingly and unintentionally.

Okano describes the transition for a very different group of students, those in vocational programs in Japan. Here, the carefully managed process by which students move from one status to another, preserves as much opportunity as possible for the individual while locating for business the best possible candidates.

While on the one hand one may find this emphasis on economic needs alienating to humanistic values, Okano and Lewko and Hein place the welfare, opportunity, and protection of youth as central values. Taylor suggests that we have made a Faustian bargain - material wealth afforded by our modern (or post-modern) society comes at the cost of the repose of traditional mores that accompanied assigned roles and status. This bargain is clearest in Okano's analysis of the Japanese placement system that, in effect, re-establishes the satisfaction that comes with "knowing one's place". Lewko and Hein describe a process with greater individualized choice which serves to widen opportunities (albeit for those occupying the top rather than bottom rung of the academic ladder). The challenges and risks, however, are greater. Taken together, the two papers suggest support for the view that less flexible processes may be more protective of future opportunities than a loosely regulated credit system.

Gender differences and education is a recurring theme throughout the volume. Taylor sees a potentially optimistic future for women contrasting with a pessimistic one for young men who lose the competition for high-knowledge, high-skill employment. Lewko and Hein account for the "leakage" of youth from the quantitative science stream by placing particular emphasis on the loss of young women. Korndörffer places women at the centre, as victims and as potential beneficiaries, of polices adopted to accommodate the "new global economy".

Korndörffer's account of the impact of reforms on Maori women alerts us to the impact that fiscal restraint and restructuring may have on the women and men of the Canada's First Nations. The resurgence of interest in the Maori language and culture parallels a similar awareness among the First Nations in Canada. Government policies of devolution and empowerment, and the debureaucratization of government services for native peoples, are evolving in Canada and have been implemented in New Zealand.

Korndörffer's description of New Zealand's government's response to the Model C world has many lessons for Canada. Taylor's Faustian bargain is again apparent. To balance consumption with production in New Zealand, the social safety net has been weakened, particularly for minorities and women. The duty of care, formerly taken on by the state, has been returned to traditional women providers, with the implied promise that new wealth will be generated by this, among other, sacrifices.

New Zealand reforms make a case study of the implementation of what variously has been termed New Right, neo-conservative, or neo-liberal economic policies. Such reforms are characterized by the introduction of competition and market pricing into all facets of a nation's economy and, especially, into government bureaucracy and citizens' entitlements. In effect, the context which is associated with the change to Taylor's Model C world, with its extensive competition between nation states within a global economy, is intentionally introduced into the internal, domestic economy.

The premises of the policies reflect the work of neo-conservative economists like Friedman, Hayek, Niskanen, Hirschmann, and Arrow, who have argued that the open marketplace provides the basis for the only economic system that can increase wealth in the long term.

Neo-conservative economists, with their belief in the market, have promoted numerous policies

including those of deregulation, privatization, and competition with and among government services, and have opposed centralized government planning, government monopolies, and an excessive emphasis on the redistribution of wealth

Viewing the citizen as a consumer of government services, these economists developed the public choice model of democracy, which relates the provision of government services to the median voter's preferences, and they emphasized the principle of subsidiarity, in which responsibility for a given service is delegated to lowest possible level of government. Exchange relationships between the public and government agencies, they suggest, imply the existence of contracts; when possible, they hold that these contracts should be made explicit, as in the case of the charters developed with their communities by the governing boards of New Zealand's schools.

Canada now faces similar economic problems, as evinced by provincial and federal policies meant to restrain public spending; even then, provincial and federal deficits are rising to worrisome, even dangerous, levels. The decentralized nature of Canada has meant that, in the past decade, provincial and federal institutions, each claiming uniqueness, have defeated organizational innovations and institutional adaptation. Often, as in fiscal policy, different levels of government have moved in opposite directions. While our federal government has tended toward neoconservative policies, provincial governments have been reluctant to follow suit.

Henry Levin concludes this volume with a challenge to the implied linkage between educational achievement and economic success. The evidence he provides, although for the US, would seem applicable to Canada. Even as the Council of Ministers of Canada conclude their plans for a national assessment, and the Province of Ontario succumbs to the demand for standard testing of students, Levin concludes that test scores are a by-product of good schooling, not an instrument of improvement. His analysis suggest that government efforts may amount to placing the lever in the wrong spot; the system will not move and the object sought will not be gained.

Levin integrates humanistic, social, and traditional processes to describe an educational program that meets the human needs of affiliation and productivity through cooperative efforts. His conclusions echo earlier comments by Taylor, Lacey, Stephens and Korndörffer on the actual demands of the workplace. The role of traditional values and behaviors, alluded to by Taylor, re-emerge as fundamental elements needed to maintain the extended order of our local, national and global economies.

These papers do not provide one set of conclusions about what ought to done to address the challenges of education and work. What they do is to provide a set of perspectives that we can use to test our lives, homes, workplaces and government policies. Several of the prominent questions that they raise include the following.

- Are we addressing the linkage between education and work if we do not ask the questions at a national level?
- Have our youth been provided with both due process and freedom of choice if their pathways to work are haphazard and contingent upon wealth?
- Is our concern with educational quality based on an appropriate understanding of education, or have we been misled by seeing symptoms as causes?

* * *

Volume II of these proceedings explores the relationship between education and work with the Canadian context. The authors and topics include:

James L. Turk, Director of Education, Ontario Federation of Labour,
"Education and Work: A Narrow Focus We Cannot Afford"

Thomas F. Powers, School of Hotel and Food Administration, University of Guelph,
"Education for Work: An Educator's View"

Kathleen Redmond, Pizza Hut Canada,
"Work and Education: The Perspective of the Employer"

Arych Gitterman, Ontario Ministry of Education and Training;
Marion Levi, Centre for Career Action, Toronto Board of Education; and
Suzanne Ziegler, Research Services, Toronto Board of Education
"Community-based Education for Career, Work, and Life"

E. L. Donaldson, Faculty of Education, University of Calgary,
"Part-time Work: The Underground Passage"

Alan Thomas, Professor, The Ontario Institute for Studies in Education,
"Training and Education: Destructive Solitudes"

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Volume II

The Ontario Institute for Studies in Education
Institut d'études pédagogiques de l'Ontario

***David Corson and Stephen B. Lawton**, Editors*

Education and Work

Education and Work

Volume II

Proceedings of the International Conference Linking Research and Practice

March 1993

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David Corson
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Department of Educational Administration
The Ontario Institute for Studies in Education

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The publications program of the Institute has been established to make available information and materials arising from studies in education, to foster the spirit of critical inquiry, and to provide a forum for the exchange of ideas about education. The opinions expressed should be viewed as those of the contributors.

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Foreword

Ronald C. Morrison
President, Kodak Canada, Inc.

As Canada prepares for the 21st century, education, business, and government will need to engage in rethinking because globalization has arrived - in Canadian manufacturing, our service sector, and in our educational system.

Canadian educational institutions must meet world-class standards in order to provide the knowledge and skills needed to ensure a base of competitiveness for Canada. In the final analysis, the only sustainable competitive advantage Canada has is the capability of every Canadian to acquire and practice skills of the highest order.

Canada's future success begins with the quality of our educational system. Responsibility for the quality of our educational system is to be shared with employers, employees, educators and government. Employees need to demonstrate responsibility and willingness to improve their skills; management needs to create the environment and support systems to provide employees with the opportunities to acquire the learning needed for individual success as well as the success of the business enterprise.

Educators need to work closely with the business community to understand what knowledge and skills are relevant not only for today but also for the future. In particular, Canada would be well-served by the development of programs that deal with:

- the transition between high school and the work place;
- enhancing access to accelerated apprentice ship education;
- the continuous upgrading of the knowledge and skills of Canada's existing workforce;
- equipping high school dropouts with skills that will enable them to obtain meaningful jobs;
- improving the knowledge and skills of Canadian educators; and
- education of Canadians about competitiveness issues.

The rest of the world is not waiting for Canada to debate and define its educational strategies and policies. Canadians must be aggressive in formulating the educational expertise that develops the skills, values, and knowledge needed to participate in an increasingly competitive global economy.

Kodak Canada's sponsorship of the Education and Work Conference, organized by The Ontario Institute for Studies in Education, is consistent with our sense of urgency about the need for fundamental change in Canada's system of education. We are particularly pleased to support the publication of the *Proceedings* in order to disseminate information and opinion to the widest possible audience.

At Kodak Canada we believe that the future belongs to those who are prepared. We are confident that Canadians can and will meet the challenge of the global economy.

Preface

Arthur Kruger,
Director, The Ontario Institute for Studies in Education

For many years *Lifelong Learning* was a slogan devoid of meaning both in institutions of higher education and in industry. Universities admitted part-time students but often had policies relegating them to second-class status. Corporate presidents spoke glowingly of the importance of education but did little or nothing to facilitate continued formal learning by their employees.

The rapid economic changes in recent years has led to a rethinking by decision-makers of the important linkage between education and work. Colleges and universities are accommodating to a changing student clientele. Many of today's students are older than the 17 to 22 year-old cohort and even full-time younger students usually hold jobs while at school. Industry is looking closely at both the preparation of those newly entering the workforce, and the need to upgrade the skills of those already employed. Education takes place both in educational institutions and at the workplace.

To Professor Lawton and his colleagues, our thanks for organizing the Education and Work conference and for producing these volumes. To Kodak Canada, our gratitude for their support for these important ventures.

Introduction

David C. Corson
The Ontario Institute for Studies in Education

A conference on this topic has a range and scope that is very wide indeed. I've prepared a short statement about "education and work" to reflect the wide interests of an Institution like this one. I hope you find that your own interests are comfortably covered by our brief.

"Education and work" extends across a broad range of human activities. "Work" itself refers to human activity that goes well beyond the narrow view of work, in the sense of "a job". "Education" too reaches well beyond the kind of training that some might argue is needed to prepare people for work, in the sense of a "job". "Education" also goes well beyond the processes of formal schooling to which it is sometimes restricted.

When people in education think of work, we think of it as a basic human activity. Work is a part of a normal healthy life; it is a physiological necessity. So work is more than a commodity to be sold on the market for maximal return. It has great intrinsic value for modern individuals and groups. Work is a vital component of the human essence. It defines our individuality; it can distinguish for others our preferred way of life; and it lays the important building blocks for self-esteem that come when individuals and groups have distinguishing marks for their identity.

Meaningful work, then, responds to an essential human need; it offers most people their best chance in life of having the necessary good of self-respect. But because meaningful work in our culture and the self-respect that goes with it, are usually linked with having employment, then we should recognise that special value of work and plan accordingly for full employment as a high social priority and social value. But under contemporary conditions, full employment is not available to us; yet, where unemployment is high, the role of education about work is even greater. Other kinds of work activities that are not formally seen as employment, assume more importance. And the worth and significance of these other work activities need to be communicated to people, if those without employment are not to be deprived of that necessary good of self-respect.

Educating people about work involves passing on the values of a community so that those being educated can have a choice about making those values their own. In our culture, knowledge and understanding are highly valued. But educated people need to be more than just knowledgeable. They need to possess knowledge that is built into the way that they look at the world; and they need critical and analytical skills to heighten the quality of their judgment in applying that knowledge. Not much of this comes from processes of training, because training is directed towards some end beyond the task of training, while education is a good in itself.

Being educated is much more than being highly trained. It involves the possession of a

body of knowledge, along with a conceptual scheme to raise that knowledge above the level of a collection of disjointed facts. Education's aim is the development of critical and rational autonomy. Reflective human beings need to understand the reasons behind things, and this is an understanding that training on its own not just fails to supply, but which it can obscure.

So it is wrong to believe that education can be linked with work through some vast process of training. But the link is still a plain one: education must include work as a central feature of its curriculum, because work permeates the normal and necessary range of human activities. In exercising a minimum skill, men and women are "at work", whether that work is in the form of a job, a craft, a hobby, an act of caring, an act of taking responsibility, or any other worthwhile human activity.

So we believe that the kinds of things that reasonably fall within the scope of "education and work", and a conference with that title, will include education and work activities and contexts of every kind.

By this we mean not just school, college, and university education; but also workplace, home-based, distance, and community education. By this we mean not just schooling for work that uses conventional approaches to curriculum, pedagogy, and evaluation; but also schooling that promotes forms of critical consciousness, and personal and group empowerment of a kind that is not always provided by conventional approaches to schooling.

By this we mean not just education for children and young adults; but also education for those kept at a distance from both schooling and employment, whose needs may be addressed through adult literacy, basic education and other special education programs, through new horizons activities for people tied to the home, and through child and adult migrant education programs.

By all this, we mean a conference that throws light on the links between education and work, while critically addressing power relationships in the wider culture and in its social order.

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Training and Education: Disastrous Solitudes

Alan M. Thomas
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Introduction

The traditional – meaning for the last century or so – context in which the topic, Education and Work, has been addressed is that of Education referring primarily to "schooling" of the young, and work as the primary focus of the balance of life; that is the first preceding and essentially preparation for the other. What was also implied was a one–time only transition from one to the other. It is difficult to over-emphasize the thought, the plans, the programs, and the expenditures that have been based on this particular paradigm, including, for example, the present misguided Stay-in-School program of the federal government. One might also observe that for the first two–thirds of this century, and to a certain extent still, it was primarily a male-dominated concept.

This essay is based on a different pattern or concept which I believe is closer to reality, and which alone allows us to understand what is taking place both in the evolution of practice and concept. It is a pattern of parallel institutions of learning management and work encompassing entire lifetimes. What is involved is not one but continuous transitions between the two institutions, and both the concurrent and consecutive habitation of both, increasingly by members of both sexes, with women now in the majority with the exception of some areas of training. While the establishment has been slow and often stubborn with respect to acknowledging and supporting this development, through a combination of curious circumstances, the Canadian people have been relentlessly bringing it about.

Today, there is a new status quo, one that is far from comprehended, orderly, or just, but one that is sufficiently well established to bring about fundamental changes in its two constituents, the schooling of children and youth, and the training and retraining of adults.

Defining the Issue

The distinction between "Education" and "Training" lies like a fault line through the history of Canada's management of learning. I use the latter phrase because learning is the common denominator between education and training. If there is one principal way in which to define the convulsions surrounding and engaging the management of learning in this country it is in terms of the changing relationships between training and education and the uncharted waters into which those changes lead.

Training, which has always applied to the learning of adults as distinct from children and some young people, has been the ultimate act of "streaming". In this case the learning capacity of those who did not do very well in the initial stages of the formal school system was increasingly enlisted in the service of the economy throughout this century, while at the same time, the training path never led back to the royal road of educational achievement and certification. Training is now at the top of almost every political agenda in the industrial world, including Canada and the provinces, involving the wholesale creation of new administrative devices, for example the Canadian Labour Force Development Board, the Ontario Training and Adjustment Board (with comparable agencies in other provinces) and Industrial Sectoral Councils, such as the Joint Human Resources Committee of the Canadian Electrical and Electronics Manufacturing Industry to mention only a few. In contrast, Education seems mired in irreconcilable conflicts, being ministered to by those reliable all-Canadian therapeutic devices of Royal Commissions and Committees of Review. With the initiatives apparently in the hands of "training", the need for careful and systematic analysis of what is happening in the management of learning in Canada becomes of paramount importance.

The relentless conjunction of these two heretofore distinct solitudes carries fundamental implications for our future as a society.

First however, in good academic fashion, we have some prior definitions to deal with. It would be easy to dismiss the distinctions between education and training as academic games, and perhaps the changes taking place will make such distinctions no more than that in the future. However, for the present, the expenditure of hundreds of millions of dollars, the nature of relationships within Canadian federalism, the success or failure of hundreds of thousands of lives, and possibly our economic survival itself, rests upon the distinction between the two.

This conference is not about the relationship between education and work as much as it is about education and employment, that is the relationship between education and work that the market will pay for. Everyone, particularly but not exclusively women, knows of the range of work in the society that is not paid for by the market, and the great difficulties in maintaining its significance. The irony becomes greater when we recall that for sixty years or more the argument for the value of a "liberal education" was based on the fact that it led primarily to the appreciation of work that was not valued by the market – almost because it was not valued by the market. In addition any student has a right to be puzzled when Education – meaning school – and work are juxtaposed, since the terms home work, school work, and the laboriousness of doing something you are required to do are familiar experiences. What then can be the true difference between the two, and is it important?

Education and Training share, at least according to that repository of lexical truth, the *Oxford English Dictionary*, some of the same character of distinction without difference.

The first observation is that "Train" and "Training" occupy nearly twice the amount of space allocated to either Education or Learning – a measure of both its importance and ambiguity. The simplest definition provided is, "to subject to discipline and instruction (the distinction is to be noted) for the purpose of forming character and developing the powers of or of making proficient in some occupation". The distinction between "discipline" and "instruction" suggests some aspect of environmental control of the learner, such as one finds in the concept of residence or more blatantly in medical education. In addition, the cumulative effect of all the definitions suggests the reality of manipulation of the learner, the existence of a fixed outcome to which all of the activities are "in train", and the absence or lack of concern for any self-determination or direction on the part of the learner. Affective outcomes are included as in "to persuade, induce or convert", and there is an additional meaning throughout of the possibility of treachery and/or deceit.

Education on the other hand includes always the act of training – the principal means to education – but in addition a somewhat broader spectrum of outcome, perhaps only reflecting multiple acts of training towards multiple objectives.

It seems quite clear, at least according to St. Oxford, that Education is impossible without training, and training without education; that is, if one is the means to the other, that means cannot be employed without achieving objectives associated with the end.

This leads us then to ask the following questions – what has been the training associated with all of Canadian education and how is it accomplished? Second, what have been the unarticulated educational outcomes of the activities in Canada designated as training?

The Canadian Experience

The history of the parallel development of Education and Training in Canada, however revealing as a major thread in our development as a society, is too long and complex to be repeated on this occasion. Its outlines are significant. While the *British North America Act* rewarded the provinces with exclusive jurisdiction over Education, it did not take long for the Federal Government to assert its will over the Learning of Canadians, specifically adult and young adult Canadians through the vehicle of Training. From the passage of the *Agricultural Instruction Act of 1913* through the long series of Vocational Training Acts culminating in the *National Training Act of 1982* – since amended several times – the federal

government manifested its growing awareness that its responsibility for the health of the Canadian economy insisted on a commensurate responsibility for a trained workforce, with which the education of children was increasingly unable to cope. The bulk of the effort was directed through the provinces, and in particular through the various educational providing agencies within provincial control – though one should note that until 1991 universities were specifically excluded. Towards the end of the period, in the early 1980s the federal authorities grew more and more impatient with the flexibility of the provinces and their delivery systems, and exerted more and more independence in distributing training funds to private agencies in the provinces.

In many respects the crisis occurred in 1966. At that time, the Pearson government thought to appease the growing restlessness of the provinces, a querulousness led by Quebec, by providing for half the costs of postsecondary education. Having bought them off, it was imagined that the way would be clear for the federal government to do what it pleased in the area of training. The *Occupational Training for Adults Act* was introduced the same year, and originally proposed that federal government would directly finance individual Canadians towards the purchase of his or her own training. The federal government had been impressed with the overwhelming success of the educational provisions for veterans of World War II, which had functioned as a voucher system. They were determined to apply the same principals with respect to training, in the sense that they would deal directly with individual Canadian citizens on educational terms, releasing all of the energy and commitment associated with individual choices.

In retrospect, it is a pity that scheme failed, since it would have introduced a feature of individual decision-making into training choices, which the contemporary developments seem to be aiming at, but which still fall far short of basic individual determination. We might have been saved 20 years of the mismanagement of training and at the same time introduced a element into training which has been traditionally associated with education – individual choice, and adult individual choice in particular.

It was not to be. The provinces, led by Ontario, forced the federal government to continue to use provincial delivery systems, mostly those engaged in providing education, for another decade. They had been less impressed by the veterans program because it had dramatically upset their ability to plan education, particularly postsecondary education, in the centralized way to which they had become accustomed. To be fair to provincial authorities, decentralization in postsecondary education is difficult to manage, unless you are willing to allow the mixed private and public system familiar in the United States, a system that, until now, Canada has stubbornly resisted.

It took another decade for the federal government to assert sufficient independence to direct training funds away from provincial agencies. During that time, evidence of adult illiteracy, the lack of employer commitment to training, and structural unemployment, particularly and most painfully among 14– to 15–year–olds, emerged relentlessly.

However, other developments also revealed the implications of the two solitudes, both institutionally and individually.

Despite the prolonged use of provincial educational delivery agencies – principally secondary schools and later colleges – education and training lived separate lives. They were generally financed separately, staffed separately, and housed separately, often in the same buildings. In the case of some Ontario colleges, adult "trainees" were entirely segregated from the rest of the students, and rarely participated in college affairs. While the age of the "regular" students climbed steadily during the 70s and 80s, meaning that there was increasingly less and less age differential between the two groups of learners, the distinctions between the two groups continued to be made. They were in fact two cultures.

Participation statistics with respect to adult education are equally revealing. Survey after survey in Canada, as in most industrial societies, indicate that the bulk of participants in adult education are not those who did not succeed in their initial formal schooling – those who might be said to need it most – but those who did succeed. About 45% of the adult population in Canada, the best educated 45%, use nearly a

100% of the public and presumably the private resources available for adult education. One could easily describe this phenomenon as a triumph of the middle class, since we have been particularly astute in the exploitation of education as a means of maintaining ourselves and securing our advancement. Yorkshire puts it well, "When Land is gone and money's spent, learning is most excellent".

However we are past the point when learning can remain a monopoly of this group, and the need to understand and reduce the apparent exclusivity of participation becomes compelling. The reasons are complex, and may have a good deal more to do with the kind of totally secular adult education available than we care to admit. Nevertheless the result is what can only be described as a form of streaming. The less well-educated citizens in Canada are being subjected or treated to more and more training, but they never return to the mainstream of education and its formal recognition of achievement. When you consider that in Canada, more than in most of the world's industrial societies, educational achievement and vocational success are tightly tied together, then it becomes clear that we are wasting both talent in the case of the society, and lives in the case of individuals. There is little convincing evidence that those who do not do well in their initial schooling are dumber or have uniformly less potential than those who do succeed. There is evidence to suggest that early school failure has a good deal more to do with class and ethnic background.

If the language provides no clear distinction between education and training, except in terms of ends and means, and if we agree that learning is common to them both, then we are entitled to repeat our questions this time in the face of a real history of administrative and political distinctions between the two, and in the face of real populations of real Canadian citizens. Has the training which each group has received as part their education been different? What attitudes, in terms of concepts of self, ability, and expectations – that is those aspects generally associated with education that results from training – are they learning, and will they learn in the future? Can we afford that they should remain the same as they have been in the past?

Looking Ahead

Recent developments insist on careful examination of the likely results. They are not simple, nor do they yield to formulas or past rhetoric.

On the immediate institutional side, it would appear that attempts to create a new learning program in Canada, some combination of the old liberal studies and the new excitement associated with "High-Tech" have failed. In Saskatchewan, and in Ontario, for example, hope was held for the new colleges of the 60s and 70s, to produce new educational models, not more or less than those in place, but different. The rash of college reviews across Canada promises little optimism with respect to that achievement. Colleges seem to be more and more and more snuggling up to the dominant formal system, and pursuing credibility on its terms. Attempts at innovation seem to have been swamped by the power of the old educational gods.

In contrast, the goals of or demand on the formal system seem daily to be stated in the language historically associated with training. Measurable outcomes, national standards, predictable skills have become the currency of educators, parents, and employers. How else is one to interpret the much-touted value of the International Educational Olympics in which young people are asked to compete with each other in terms of fixed levels of achievement?

Coaching, as distinct from teaching, is what is applied in areas of skill development, such as athletics and music, though from each we expect something more than the simple exercise of skill. No doubt coaching is what these young academic athletes will receive as they line up for their international competitions.

Perhaps there will be little harm done by these games – but the point to be observed is that it is training, conventionally conceived, that seems to have taken over the educational systems in Canada. If that is the case then our question takes an unexpected twist. If training, as defined, is to dominate the formal systems of education – the recent report of the Committee on Advanced Skills in Ontario seems to support that notion— then what educational goals can be expected? In a society committed to multi-culturalism, which

seems to insist on ignoring the delicate task of citizenship development performed by the formal schools, particularly at the lower levels, the question has a critical significance.

Alternatively, in the traditional areas associated with training, where so much organizational activity is evident, similar contrasts are to be observed. First, in the new mechanisms being introduced, OTAB is one example, individuals representing rival interests, which have limited records of past cooperation, are suddenly brought into intense contact with each other in order to address a mutual problem upon which they have provisionally agreed. In this case the problem is the more efficient management of learning in Canada.

The history of adult learning indicates that the most significant social change can be attributed to just such novel conjunctions. The learning of the participants in these new bodies will itself contribute to a new era in that management. *The Report of Joint Human Resources Committee of the Sectoral Council of the Canadian Electrical and Electronics Manufacturing Industry, Connections for the Future*, is a fascinating case in point. In these recommendations we find two things: a concern for a broader kind of training than we are historically accustomed to, with demands of the development of objectives normally associated with education; second, demand for greater freedom of access on the part of those workers who have been subject to training and traditionally denied access to formal education as adults.

While education seems to be turning to training, training is moving in the opposite direction. Perhaps, at long last, we will see the emergence of the acknowledged combination of the two that will provide the educational basis for all in a renewed society.

It may also be that we are moving at last to the model suggested by the Greeks, particularly Aristotle, of training for the young and education for the more mature when they are ready for and interested in it.

A second development of critical importance is the developing implementation of Prior Learning Assessment (PLA) throughout Canadian education. You may have noticed the recent formal announcement of the Ontario Minister of Education and Training of the implementation of PLA in the college system in Ontario. Its use is relatively wide-spread throughout Canadian education, but so far except in Quebec, British Columbia, and now in Ontario, has been at the pleasure of the teaching agencies and their personnel.

PLA identifies learning, and is indifferent to whether it has been achieved under the rubric of education or training, or by some other means. Properly utilized, what it promises is the intermingling of these two previously separate traditions and cultures in a manner that can be enormously revitalizing for education in Canada. It also promises the major gateway for those adults excluded from access to formal education in the past. It can be argued that the only real way to change an educational system, and providing agencies, is by changing the composition of the student body, particularly when that change represents profound changes such as those associated with cultural background and age. The new conjunctions of training and education promise to do just that.

Conclusion

While the implications of these developments remain obscure, there are some immediate conclusions to be drawn. The federal government seems to have abandoned, or to be abandoning, its previous practice of using training as the vehicle for the stealthy invasion of the provinces' management of learning. That invasion was, it seems to me, characterized by general disregard for the interests of individual citizens and for their learning experience and styles. Instead, the federal government is retreating to the establishment of external measures of achievement which will be used, undoubtedly, for purposes of reward and chastisement. It is ironic that our first national system of education will, in fact, more closely resemble a national system of training.

Training and education now seem lodged in provincial hands, where there ought to be the maximum opportunity to remove the old stigmata and create new united systems for the management of the learning of all. The creation of the new united Ministry of Education and Training

in Ontario can seem to be a hopeful sign.

There are, however, old habits from the previous history of solitude engrained in the provincial bureaucracies. The apparent independence of some of the new training bodies give some cause to be optimistic about overcoming those old habits. What we have to make sure of is that we do not get the worst of both of the old systems – training of the narrow, short-term variety that applies to the development of neither the occupation or the individuals that maintain it; education that denies the training it necessarily engages in—and thereby ignores the educational results.

We cannot avoid the fact that the new systems for the management of our learning in Canada will be immensely more diverse, various, and only partially visible in operation and effect. We will need a new vigilance in analysing these activities, and new tools and concepts of that examination. I expect that is the task to which we must devote the most immediate attention.

Two final observations seem in order. First, I note the amazing alteration of patterns of gender participation in education and increasingly in most training. At every level of education women now outnumber men, both full- and part-time. It seems evident that their different life-cycles and sensibilities will continue to produce changes in both the form – where they have already occurred – and substance of both education and training. What the dimension of the latter will be remain unknown.

Second, while the old "liberal education" appears to be withering under its burden of being perceived as fundamentally European, white, male, in content and spirit – who would openly aspire to the latter two categories these days – a new concept of "holistic" education seems to be making some bid to replace it. Perhaps it is from that development we can expect the energy and substance for the new combination of training and education.

Whatever takes place, and the developments are fast and multifarious in character and origin, it is apparent that we can no longer accept any institutional or intellectual distinction between education and training; that both, under whatever auspice, public or private, and irrespective of the age of the learner, are in the domain of public concern and responsibility. We are obliged to ask what training and education, provided by whom, to whom, under what auspices and to what end. My own conclusion is that it would be better to ask that question of learning rather than of the other two, and that we already have simple tools for doing so and getting useful answers. The development of a Learning Index is long overdue.

Let me conclude with the words of Mr. Justice Smith, of the Ontario Supreme Court, who in 1982 was faced with the difficult judicial task of deciding the difference between training and education:

> *The world is no longer divided neatly between the educated on the one hand (lawyers, doctors, etc.) and the great mass of unskilled on the other. After advancing beyond the stage of artisan, we now understand the word 'calling' as no longer being the private domain of the cleric, the politician, and other well-established high profile professions. The gardener, the chauffeur, seafarer, sanitation engineer, artist, all follow vocations or callings as they pursue their particular life's work. ... We cannot countenance the treatment of plumbers, pipefitters, or papermakers, who assure essential services in organized society, as belonging to a class that attracts less deference because their members are involved in a more utilitarian activity. They cannot be assumed to be making less of a contribution nor can we assume that the legislature intended to discriminate in that way.* (Seafarers Training Institute vs The Corporation of the Township of Williamsburg, Supreme Court of Ontario, 1982.)

It seems that the distinction between training and education has been legally dead for nearly a decade. It is time for us to realize the implications of that decision and the developments upon which it was based.

Education and Work: A Narrow Focus We Cannot Afford

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Introduction

What is the purpose of a public education? Is it, in the words of the conference brochure, to "develop the skills, values and knowledge needed for individuals to participate fully in an intensely competitive global economy"? I would suggest not.

From labour's perspective, public education has a more collective and a more activist purpose. It is not to take the status quo for granted and adapt individuals to it. Rather it is to help people individually and collectively to think knowledgably and critically about the world as they find it, to see that world in new and different ways and to be able to be activists in respect to their views. This is not a very fashionable vision for education in the current context, but it is one we embrace.

The Economy as the Measuring Stick

Everywhere I turn, I find that the measure of good education is being redefined in terms of the school system's success in preparing people for the labour market. I will argue later against such a narrow vision. For now, I would like to note two problems with such a measure: there is little good evidence to judge the "success" of schools in preparing people for work, and there is consistent distortion of what the future labour market will look like.

Complaints about falling educational standards – that high school students cannot read or write – are common. This is quickly becoming "common" knowledge. But is it right? Are students less well prepared? The evidence is by no means convincing – but that does not seem to slow the rhetoric.

The case for the superiority of the past is usually made in the form of anecdotal accounts of a previous golden age of education – a golden age that never existed. When this argument collapses, the critics try a different approach. They argue that, regardless of the past, education is now not good enough, given the changing job market. A recurrent assertion is that jobs are getting more skilled and that more than half of all new jobs in future will require postsecondary education.

Are jobs getting more skilled? Here the evidence is as good as any job forecasting can be, and the answer is "no". The distribution of jobs is becoming more pear-shaped. The great bulk of middle level, middle skill jobs are being replaced. A minority of them are being up-skilled, and the majority are being deskilled. The most sophisticated job forecasting is done biennially by the United States Bureau of Labour Statistics. Their surveys show a consistent pattern: the bulk of new jobs are at the low skill end of the spectrum. In their most recent projections (Silvestri & Lukasiewicz, 1991), they list the ten occupations that are going to account for the greatest number of new jobs between 1990 and 2005. Only two of them qualify as highly skilled. They project that the largest category of new jobs will be retail salespersons. Second will be registered nurses – one of the two highly skilled jobs. Third will be cashiers. Fourth will be general office clerks. Fifth will be truck drivers. Sixth (and the other high skilled job) will be general managers and top executives. Seventh will be janitors and cleaners, including maids and household cleaners. Eighth will be nursing aides, orderlies and attendants. Ninth will be food counter, fountain and related workers. Tenth will be waiters and waitresses.

These are the ten jobs that will represent the largest numerical growth – hardly a picture of a high tech, high skill future.

Canadian data show a similar pattern. Even within jobs, new technologies are being used to deskill work. More and more of the "skill" is being built into the technology – so that less skilled workers can use the more skilled technologies. Ironically, the sophistication of the technologies one uses at work is being used as evidence that the work demands more skills.

This was brought home to me when I ran into an old friend who is a skilled machinist. I had not seen Matthew for several years. I asked how things were at work. His reply was "great". He told me that he had a new job at his old plant. "What are you doing now?", I asked. "Oh, I sit in an air-conditioned control booth and oversee the operation of a whole bunch of computer-controlled machines" "That's great, but what do you do?", I persisted. "Well, I sit in this wonderful control booth and make sure everything is operating correctly." "Yes, but what do you do?", I asked again.

After several more attempts, Matthew described what he "did" – which was to wait for a red light indicating trouble and to phone the appropriate person whenever it went on. While he now sits in air conditioned splendour (for the computer's benefit, not his) and works with very expensive technology, his job is largely deskilled. His biggest challenge is dealing with the boredom. Matthew's experience is not atypical in the wonderful world of new, computer-based technologies.

The result is a deskilling of work even when the working conditions improve (air conditioning for the computers) and the responsibilities increase (Matthew's inattention could cause enormous damage). Despite this – apparently undaunted by the reality of what is happening in workplaces – we are increasingly confronted with rhetoric about the growing skill of work and the need for reform of education to meet the needs for a more highly skilled workforce of the future.

What is happening here?

The Poor Economy

First, there is the desperate state of the economy. It is an employers' market. Whether the job is deskilled or not, the employer can demand qualifications that have little or no correspondence to the requirements of the job. Education, for employers, is a useful means to sort people at a time when there are far more workers than jobs. Any worker who objects to the demand for more and more credentials on the grounds that she can do the work is cast aside in favour of five who comply with the employers' demands. Furthermore, workers faced with high unemployment, high job insecurity and a skyrocketing number of jobs with a contingent attachment to the labour market (part-time, sessional, seasonal, contract) view education as a potential competitive advantage for themselves. Education has reverted to one of its traditional functions in our society – as a way of sorting people. Whether or not more education is necessary for people to do their jobs is a moot point. Education is being forced on workers because it is one of the key bases by which employers decide who gets the opportunity to work.

The fact that employers are choosing to require more education is often subject to mystification. Last year the Conference Board of Canada released a study on the costs of our "high" dropout rate. They estimated how much less a dropout earned because of leaving school early and extrapolated from this to claim that dropouts cost the Canadian economy many billions of dollars (LaFleur, 1992). Somehow they missed a fundamental point: more education without a change in the range and nature of jobs does not create any wealth. It merely shuffles the deck. If everyone had a Ph.D., we would still have a million and a half unemployed, a million underemployed and many millions doing boring, mindless, poorly-paid jobs. More education for some allows them to displace others, but it does not create new jobs nor increase the overall opportunities for the population as a whole.

The relation between education and the economy is reversed in most of the talk about education and economics. More education in Canada does not strengthen our economy, although it increases the job opportunities for the

more educated at the expense of the less educated. A stronger economy, however, creates the conditions for a stronger educational system. When that causal relationship is misunderstood, we end up with education as a competitive factor among workers and between workers and employers. This fosters a narrow, utilitarian view of education by both students and employers (not to mention parents).

Business' Agenda for Education

Second, big business has launched an all-out campaign to capture the educational system – for its purposes. Business leaders are not shy about asserting business' pre-eminent role with respect to the future of public education. For example, John Akers, then Chair of IBM Corporation and Chair of the Business Roundtable Education Task Force, had a feature article in *The Wall Street Journal* shortly after the Gulf War in which he praised the American effort against Iraq and called for "an equal commitment to rescue our educational system." The basis of his call was straight-forward: "Business is the primary customer of American education" (Akers, 1991).

Fortune magazine devoted a special issue (October 21, 1991) to lamenting the state of the educational system, talking about how it needed to be reformed, putting forward corporate leaders' views of business' role in that reform and listing (for almost 20 pages) "How Business Helps the Schools".

The Conference Board of Canada has had a series of sold-out conferences recently on "Business and Education". The Canadian Chamber of Commerce has devoted increasingly large amounts of resources and time in pushing business' agenda for public education.

A who's who of the corporate elite in Toronto has recently persuaded the nine school boards in the greater Toronto area to form a joint "partnership" on education. The Corporate Higher Education Forum continues to spew forth its views on educational reform.

At the grass roots level, "business-industry-education councils" are pushing the business agenda for schools. Junior Achievement is continuing to inject a business perspective into schoolchildren as early as Grade 5. Corporations by the hundreds are "adopting" schools.

There is a certain irony here – having a poor record in education and training themselves, the corporate sector has taken the role as the self-appointed champions of excellence (their vision of excellence) for public education. Not only is their record of educating and training their own employees generally bad, corporations are largely responsible for setting the present cultural climate that makes genuine education so difficult.

Writer and former Director-General of the Ontario Science Centre, Jim Parr, comments on this curious situation:

> *A particular irony is the common complaint made by corporate employers that our schools, at all levels, produce illiterate graduates. (Their use of the word 'produce' is telling in itself.) The fault lies as much with employers as with the schools. This age is dominated by the media whose distribution and penetration are made possible by the numbing advertising of corporations. The age throbs with non-lingual rock and sports cultures; cultures which make profits not only for big-star performers, but also for the owners of stadiums, teams, and the franchisers of junk food. The spoken and written word is being eliminated by the promotion of instant gratification. Buy now, pay later. Under these circumstances, expecting school teachers to be able to teach children traditional, linguistic ability is as unrealistic as expecting kids to be able to force me into an appreciation of rock and the NHL* (Parr, 1991, p. 21).

Irony aside, educational authorities, faced with significant underfunding, are desperate for resources. Increasingly they look upon business as a rich uncle, who, if the authorities are nice, will bestow needed "gifts". The additional irony is that the corporate drive for deficit reduction

has helped bring about the serious underfunding of education that now is making educators look to business for help. But there are strings attached to this help. Business does have an agenda! Part of that agenda is to have education defined in terms of its service to the economy – a code phrase for defining education in terms of its service to business. This aspect of their agenda has been remarkably successful.

Another part of the agenda is to focus education on preparing people for immediate entry into jobs – to make workers job ready in attitudes and skills. The candour of many business people is breath-taking. For example, Gary Johncox, Vice-President of Human Resources at MacMillan Bloedel, proudly told the audience at a Conference Board of Canada conference his priorities for high school education:

> *I think if I had my way, we would only teach six core subjects in high school. I realize that my list is selfish to my industry's needs, but it is nonetheless what we need: English, Math, Physics, Chemistry, The Importance of Showing up for Work, and How to Get Along With Others. With only half my tongue in my cheek, I think we get all the geography, law, ethics, and probably more than enough biology from T.V.* (Johncox, 1990)

At a public consultation on training sponsored by the Ontario Premier's Council on the Economy, the Director of Training for Toyota chose to attack Conestoga College's electrical apprenticeship program. His complaint against Conestoga was that half of what they taught electrical apprentices was not needed when they came to work for Toyota. While some corporate CEO's like to wax eloquently about the importance of lifelong learning, critical thinking and learning how to learn, their plant managers and directors of human resources generally press for a narrower focus on entry-level job skills. Such folk dominate the hundreds of community college program advisory committees and are a major force in limiting the breadth of college programs.

A third part of the corporate agenda is commercial. It is not coincidental that the leading business spokespeople on education tend to be from major high tech companies such as IBM, Xerox, AT&T, Northern Telecom, Kodak, Boeing and General Electric. They see education as a huge potential market for their goods and services – provided education is changed.

Think for a moment about education more narrowly focused on performance standards, using explicitly competency-based models, stressing national examinations and standardized tests, with intensified math and science emphasis and organizational restructuring for accountability and enhanced productivity. Such an educational system is ripe for a significant increase in the newest technologies and services being peddled by these companies. Already, Education Alternatives, Inc. (EAI) – a for-profit initiative contracted for management of schools in Dade County, Florida, and in Baltimore – has a total systems control philosophy developed from Control Data Corporation that emphasizes continuous, computer controlled monitoring of student and teacher performance. IBM provides EAI with its latest hardware and software in exchange for EAI's agreement to provide feedback for IBM product development. A major partner is this business is Paramount Communications.

The Edison Project is an ambitious plan, heavily financed by Time Warner and Phillips Electronics to provide 1,000 for-profit "public schools" – a system heavily dependent on advanced technology for cost effectiveness. Douglas Noble, in a brilliant new paper on technology in education, discusses these developments. Among other observations, Noble points out that the major roles played by Time Warner and Paramount – giant communications conglomerates with multimedia visions for education – "are another harbinger of things to come." Overall, the education system has perhaps the greatest new market potential of the major of corporations making education their public concern.

A final part of the corporate agenda for education is to make schools not only markets for new technological products but to change them into organizations run on the principles that guide multinational corporate behaviour. The business desire to reform education tends to focus on the need to improve educational pro-

ductivity through organizational restructuring and technological innovation.

Noble draws to our attention that "restructuring" in the corporate lexicon means "retrenchment". IBM has restructured its workforce by 25% since 1986 – reducing employment by 40,000 last year alone. General Electric has restructured its workforce by over 25% – from 400,000 to less than 300,000. Phillips Electronics has laid over 45,000 workers since 1990; Kodak has eliminated 20,000 jobs.

> *This is what high tech corporate 'restructuring' has really been about, along with the dismemberment of monolithic bureaucracies into independent units threatened with extinction if they fail to produce. What irony, then, and what a chilling prospect, to read the words of James Dezell, president of IBM's new independent education division EduQuest: 'Just as IBM is being restructured, the American educational system is in the midst of an awesome restructuring'* (Noble, 1993, p. 11).

Restructuring schools, as envisioned by these corporate leaders, has to do with selling their products and imposing their organization models. David Kearns, former Chief Executive Officer of Xerox Corporation and more recently Deputy Secretary of Education in the United States, is unabashed in declaring the corporate perspective: "Public education is a $150-billion-a-year industry. Business will have to set the new agenda . . . a complete restructure driven by competition and market discipline, unfamiliar ground for educators" (quoted in Harris, 1992).

The corporate vision of schools as a vast market for corporate technological products keeps recurring. Allan Collins from the firm that was a principal researcher for the Apple Classrooms of Tomorrow program talks about his work is schools as an attempt "to construct a systematic science of how to design educational environments so that new technologies can be introduced successfully" (quoted in Noble, 1993, p. 11). But, the goal is more than schools as market. It is schools as new educational worksites compatible with the new corporate worksites in which technologies are used to replace skilled labour – showing once again corporate mistrust of having to rely on human agency.

Denis Doyle, co-author with David Kearns, of Winning the Brain Race, exposes this vision of corporate technologies in education:

> *We do not yet have the technologies at our disposal to create human capital as readily as we created physical capital. But at some point we will . . . it will break the mold and eliminate the gridlock of labour-intensive schooling . . . . Schools are actively afraid of, even hostile to, technology because in their bones educators know that technology will replace people. It always has and always will. About this matter educators' hunches and fears are justified* (Doyle, 1992, p. 515).

Roger Schank, a leading authority on artificial intelligence, whose Institute for Learning Sciences is financed by Ameritech, IBM and the US Department of Defense, is even more forthright. According to one account, Shrank "would replace teachers with computers since most teachers are intellectually and temperamentally ill-equipped to deal with schoolchildren . . . even though Schank would like to see teachers dethroned, he doesn't want them banished from the classroom. Instead, their roles would be considerably diminished so that they'd serve as teaching assistants to computers" (Blades, 1991, pp. 9-10).

To understand where they want to take schools, we need to understand what is at a premium in the new workplace. There is no better and more available example of the new workplace than the local McDonalds or Burger King. Both are excellent examples of most employers' dreams. The restaurant used to be a prime example of a labour-intensive, low-tech business. Most costs were wage costs and there were a range of skills from the highly skilled chef to the unskilled dishwasher. McDonalds and Burger King fundamentally changed the business. With the development and introduction of new technologies and the concomitant introduc-

tion of a new organization of work, they transformed the restaurant into a high-tech workplace largely devoid of skills. The most highly skilled worker is probably the cashier who does not even need to know the cost of any product. He simply pushes the appropriate button on the register and the machine enters the cost, totals the bill and advises the cashier on the amount of change to give. McDonald's and Burger King's work organization and use of technologies allows them to use the most readily available workforce – be it teenagers or senior citizens; have them ready to work with virtually no training; assign them to three hour shifts; replace them if they do not smile right; and yet be able to turn out a remarkably consistent product that meets management's design specifications, whether the operation is in Toronto or Tuscalosa, Alabama or Tokyo.

In different businesses in a variety of industries, this goal of consistent, high quality production that allows use of a cheap, available workforce and dispenses with reliance on skilled workers has proved elusive. But new technologies are making it possible, as in the case of McDonalds and Burger King. In these "new" workplaces, several workforce characteristics are evident. These are the characteristics of the future – characteristics that employers are trying to build into the educational system today to prepare tomorrow's workers for the employers' mold.

One characteristic is multi-tasking. This is not to be confused with multi-skilling, which implies that a worker has learned a number of skills. While employers often refer to multi-tasking as multiskilling, it is a serious misnomer because the work, as in McDonalds and Burger King, is being emptied of skill. (It still may be demanding and stressful, but it requires little learning time.) Basically the pattern emerging is one of fewer people being assigned to do more and more deskilled tasks.

A second characteristic of the new workplace is teamwork. While teamwork has a nice ring to it, we must be clear about what it really means. Workers are increasingly made to be more reliant on each other and to take on supervisory responsibilities as a team. In some cases, teams have the authority to hire and fire "team" members. This new "freedom" is largely made possible by new technologies that make assembly-line production outmoded and by technologies that allow careful electronic monitoring of worker performance by management. As an added benefit to management, teamwork often allows a significant reduction in the number of supervisors – thereby cutting costs significantly. The only question that remains is whose team are workers actually on.

A third characteristic of the new workplace is loyalty and individual responsibility. Since the new workplace involves workers using expensive technology and a more integrated work process, substantial damage can be caused by inattention, by sloppiness or by wilful disregard.

It is not surprising that much of the current training of the non-managerial workforce is "cultural" – training not focused on skills but on indoctrinating the employees about the importance of competitiveness, loyalty, and company policy. Multi-tasking, teamwork and loyalty are the focii for workers in the management-designed workplace of the future. As Noble (1993, p. 12) notes:

> *Above all, high tech corporate interest in education reform expects a school system that will utilize sophisticated performance measures and standards to sort students and to provide a reliable supply of such adaptable, flexible, loyal, mindful, expendable, "trainable" workers for the 21st century. This, at bottom, underlies the corporate drive to retool education and retool human capital.*

Labour's Vision of Education

Labour's oft-repeated uneasiness about greater corporate involvement in education springs from our differences with business on the issues of the purpose of public education. The measure of good education is not primarily its ability to meet the needs of the economy by training future workers. Education has a broader purpose and social obligation. All people, regardless of their status in the economy, have the right to a good education. People are not only workers but also family members, community

activists and citizens in an increasingly complex world.

People need a good education in all these aspects of their lives. Society has an collective interest in an educated citizenry particularly now that pluralistic democracy is seriously at risk – not from tinpot dictators but from changes that raise increasing questions about the ability of nation-states to govern in the face of massive transnational corporations. Of the 100 largest economies in the world today, 47 are transnational corporations. The sheer power of the giant corporations has grown not only with their size but also with the technologies they have developed that allow them greater freedom in locating production of goods and the provision of services anywhere in the world. Machine tools in Mexico can be programmed from head offices in Detroit. Local calls to airline reservations offices in Vancouver can be redirected to reservation phonebanks in Barbados.

New "trade" agreements, such as the Canada-U.S. Free Trade Agreement (FTA) and the North American Free Trade Agreement (NAFTA), extend the power of transnationals by limiting the rights of nation-states to regulate corporate behaviour. The ability of Canadians to manage our economy and society for our social and cultural objectives of justice and equality is at serious risk. Now more that ever we need an educated citizenry to meet these challenges, to help find ways of preserving our democratic rights in the face of massive corporate power. It is for this reason we are so adamant about destreaming and about access for all to excellence in education. This is why we are angered by tuition increases that make postsecondary education less available for those of limited incomes. This is why we oppose the underfunding of education that results in large classes and a poorer learning environment, especially for disadvantaged children. This is why we are so troubled by a special education system that consistently fills its top streams with children from the middle and upper middle classes and fills its bottom streams with the working class and the poor. This is why we do not jump up and down in excitement about School Workplace Apprenticeship Programs. There are few jobs anyways for apprentices and such programs too often perpetuate class-based streaming and deny upward mobility to workers already in the workforce. This is why we oppose "back to the basics" initiatives because the "good old days" were not so good unless you were middle class, white and from a British/Western European background. The teaching practices and curriculum in these "good old days" were inferior generally to today's pedagogy and curriculum.

The labour movement wants an education system committed to excellence for all; an education system that is really accountable individually (this does not mean standardized tests) and socially; and an education system that helps preserve and strengthen democratic decision-making structures such as school boards rather than by-passing them through privileged business partnerships. No group, whether it be business, labour or others, should have privileged access to the educational system nor a privileged position in shaping the decisions of that system.

Education must not be measured in terms of how well it prepares people for work. Its true measure must be how well it prepares an informed, active and socially conscious citizenry - productive in all aspects of their lives. George Martell, a professor of social science at York University and a former City of Toronto school trustee, captured this vision in a speech several years ago (quoted in Davis, 1989, p. 101):

> *Secretaries and plumbers, steelworkers and retail workers, mechanics and clerks must also be historians and economists, poets and scientists, intellectuals and artists. It is only through these activities that they can be full citizens – capable of powerful and purposeful work and community action. Many workers try to carry on these tasks, but they are running deeply against the grain of what the society expects of them. We have to fight for schools which open our kids to all these activities - to give them a real education.*

This, not our preparation of people for work and the economy, has been our failure in the past, and this is our challenge for the future.

References

Akers, J. (1991) Let's get to work on education. *The Wall Street Journal*, March 20.

Blades, J. (1991) Thinking ahead. *Chicago Tribune*, March 24. Section 5.

Chomsky, N. (1993) Notes on NAFTA: 'The Masters of Mankind'. *The Nation*, March 29.

Davis, J. (1989) Taking charge of our future. In J. Davis *et al.* (Eds.). *It's Our Own Knowledge: Labour, Public Education and Skills Training*. Toronto: Garamond.

Doyle, D. (1992) The challenge, the opportunity. *Phi Delta Kappan* (March).

Fortune (1991) Education/Special Report. October 21.

Harris, J. (1992) Corporate involvement in education. Paper presented at the Ontario Federation of Labour Conference on Corporate Involvement in Education, April 10, 1992.

Johncox, G. (1990) Presentation to the Conference Board of Canada Roundtable on Literacy in the Workplace. Toronto.

LaFleur, B. (1992) *Dropping Out: The Cost to Canada*. Ottawa: Conference Board of Canada.

Noble, D. (1984) *Forces of Production*. New York: Knopf.

Noble, D. (1993) The regime of technology in education. *Holistic Education Review* (Summer).

Parr, J. (1991) Companies in the classroom. *Our Times* (May).

Reiter, E. (1991) *Making Fast Food*. Montreal & Kingston: McGill-Queen's University Press.

Silvestri, G. & Lukasiewicz, J. (1991) Occupational employment projections. *Monthly Labor Review* (November).

Education for Work: An Educator's View

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Introduction

Education is at once a social process which responds to a society's needs, and a significant investment of time and money for the individual student. The value for the individual is heightened further by the ways in which education will shape his or her life professionally and personally. In an earlier generation, the balance between these interests – society's as well as the individual's instrumental and developmental interests – was expressed in the term, "a liberal education".

In this paper, I argue that education for careers must measure up to the standards of a liberal education, and that occupational educational programs offer one format for a liberal education. The pattern I use to consider a liberal education is derived from the classic *trivium* and *quadrivium*, but I assert that such an education must be defined by the contemporary needs of both students and society. Finally, I propose that the key to fulfilling the promise of occupational programs lies, in significant part, in the development of a broadly-educated faculty.

When I first began teaching in Hotel, Restaurant and Institutional Management, as a person whose own education began in the liberal arts, I was concerned about the lifetime validity for students of these educational programs. Experience with students taught me that it was the students' *interest* which validated their studies. Highly-motivated students would work hard because they were convinced that what they were learning was meaningful for them. Subsequently, a period of concentrated study of the issues raised by educating for careers helped me to understand professional education from a more theoretical perspective.

My observations, drawing on my own experiences, have a somewhat personal flavour to them. Within the educational community there are highly divergent views on just what a university education should consist of, ranging from those who would express their course objectives in behavioral terms and rely on the rationale of mastery learning, to those whose view of curriculum planning is limited to the "Great Books". There is considerable concern with vocationalism in the university at the same time that work-related programs attract increasing numbers of students.

Occupational Education

A criticism of occupationally-oriented programs centres on the degree students focus their education on the instrumental, concentrating on narrow specializations. Because an occupational view of the world is specialized, an occupationally-oriented education tends to divide rather than unify a society by leaving students deprived of literary and philosophic traditions of Western civilization. There is, unfortunately, a significant and problematic element of truth in these criticisms.

Just what is the educational content of a professionally-oriented university program? There are at least three major elements each with its own problems: the *facilitative*, the *conceptual* and the *technical*. I illustrate these elements with examples from hotel and restaurant curricula, but these elements are broadly similar across most professionally-oriented programs.

Facilitative. Facilitative courses provide students with basic intellectual skills, most promi-

nently those relating to written and oral communication as well as those which develop the students numeracy and quantitative skills. Although these are basic because they are important to all other intellectual activities, students' preparation in them is often inadequate. It is not my interest to lay blame but simply to relate the contemporary challenge. We do get students at the University of Guelph in the university level program of Hotel and Food Administration who have limited quantitative skills and problems with the written word, though they have graduated from high school with at least a 70% average. While the work of developing these facilitative skills is important, there is relatively low priority in most university faculties for basic, skill-oriented courses. A number of specialized writing courses, developed for particular programs, have been among the first to be discontinued in the current austerity period. Similarly, our university's public speaking course has been discontinued. Yet, these skills are an essential part of a liberal education.

Conceptual. In the field of hotel and school administration, courses whose main emphasis is conceptual include subjects such as marketing, organizational behaviour, operations analysis, operations management, and business policy. These courses involve the critical appraisal of ideas and the integration of earlier courses. Upper division offerings in other majors have a similar function. For instance, in a dietetics program, a course in diet modification and senior seminars play a similar role.

Technical. "Technical" courses get a bad press among many academics but John Dewey observed:

> *The elements in industry, due to mere custom and routine, have become subordinate in most economic callings to elements derived from scientific inquiry. The most important occupations of today represent and depend upon applied mathematics, physics, and chemistry. The area of the human world influenced by economic production and influencing consumption has been so indefinitely widened that geographical and political considerations of an almost infinitely wide scope enter in. It was natural for Plato to deprecate the learning of geometry and arithmetic for practical ends because, as a matter of fact, the practical uses to which they were put were few, lacking in content, and mostly mercenary in quality. But as their social uses have increased and enlarged, their liberalizing or "intellectual" value and their practical value approach the same limit.* (1966)

A course in accounting offers students a close-up look at a basic and widely-used model for converting data to information. A course in cost control presents the logic of economic rationalization in an applied context. The *philosophy* of breakeven analysis, payback periods and cost effectiveness are unique to the modern era. But whether these aspects of courses receive attention depends on *how* they are taught and *by whom*.

There is, then, no inherently illiberal course and the division made between courses necessary to a liberal education and those which are not is invidious and not helpful. The truth is that *any* course may be taught in an illiberal or unenlightening way – just as "technical" courses can and should awaken students to the excitement of logical reasoning by showing them how and why logic may be used. The key to what happens is not the subject; it is the instructor and the approach taken to the course.

A Liberal Education

The period following World War II saw higher education change from a class-centered phenomenon catering principally to the wealthy and a few *very* bright disadvantaged young people to a democratic mass-oriented institution. The consensus which existed as to the essential elements of a liberal education prior to World War II has largely broken down. Describing that breakdown in 1975, Nathan Glazer put the problem in this way:

> *We can no longer resort to tradition. Because Greek and Latin literature was the essential education of those few of our forefathers who received a liberal education, must we limit ourselves to that? To some extent a new canon of works from the Middle Ages, the Renaissance, the*

> *Reformation, and the great seventeenth, eighteenth and nineteenth centuries has been created. Yet we are troubled by the problem of the rise of new areas of the world making claims for their literature and art and religion, and even of the claims of science to become part of our general education curriculum. Undoubtedly there is a major tradition of Chinese, Indian, Japanese and Islamic literature; Africa makes its claims too, but it is hard to know what to add to our overburdened general education from that continent. Latin America makes its claims. Modernity makes its claims. And how modern should one be? Up to Yeats? To Robert Lowell? Or to Allen Ginsberg? The questions seem unanswerable.* (1977)

To this list, developed 15 years ago, issues of race and gender need to be added.

> *The classic pattern for a liberal education began with the* Trivium, *a Latin word meaning a place where three roads meet, and progressed to the* Quadrivium. *The* Trivium *consisted of grammar, rhetoric and logic while the medieval* Quadrivium *was made up of arithmetic, geometry, astronomy and music. These patterns offer guideposts for the minimum goals of an education, including professional education programs.*

A modern interpretation of the seven classic liberal arts would include logical problem solving, skill in communication in writing and speech, quantitative skills, and familiarity with the methods of the natural sciences and the fine arts. The difficulty is one of translation, I believe, rather than of replacement. The needs of a liberal education must be defined by the times but the dilemma remains that of acquiring the requisite intellectual skills necessary for living an effective life.

The Match Between Liberal and Occupational Education

Defining a liberal education is a contemporary and a timeless quandary. How well does the professional education of today measure up? For grammar and rhetoric, read courses and assignments that emphasize written and oral work. In most fields, the movement toward "writing across the curriculum" has had a major impact on both faculty and students. Critical standards regarding written assignments in professional courses can have a major impact on how well students write, as my experience and that of colleagues suggests. Assuming we do not lose the necessary supports in this area because of economic exigency, professionally-oriented courses of study have the capability of teaching their students to communicate in writing. As well, the use of the case method and a high degree of oral participation in class can enhance students' ability to use the spoken word in public.

Note, however, that such students will *not* be exposed to Shakespeare, Chaucer, or Faulkner unless they choose to study them. That is their loss but, in all candour, it may be a small loss if compared not to what Shakespeare *can teach* but what unwilling students *will learn*, if required to take a course "for their own good".

The third element of the *Trivium*, logic, as well as the numeracy, quantitative skill development and understanding of natural science that stand for a large part of the *Quadrivium*, are all addressed directly in required courses in my field. Again, the case method is an especially powerful tool because it requires the use of logic, both deductive and inductive. The increasingly common use of statistics as a tool in most applied fields, and the close relationship of many applied fields to some branch of science, suggest to me a survey of practice would reveal a similarly favourable finding in a majority of applied studies programs.

Courses the student takes, however, may deal with quantitative and scientific issues without ever making clear what the scientific method *is* as a means of reasoning, and how its positivism affects our civilization and our times. Once again, how the course is taught becomes central. That is, it is important that the method and goals of teaching emphasize broadly educative rather than simply technical topics.

The matter of the fine arts -- the music of the *quadrivium* – leads to a less than happy conclusion but this is hardly the fault of professional

faculties. For these subjects, the professional program must turn to the offerings of other departments in the university. Courses designed for non-majors, usually with very large enrolments and limited resources, are the result. These classes, for non-majors, often seem designed as an easy exercise for both student and faculty members, in which credit hours are generated for the department at a minimum cost. Alternatively, the student may encounter courses designed for the students intending to concentrate in that subject as a major field. The courses for students in the majors are often taught with a view to their success as graduate students and the courses have an almost technical thrust which limits their usefulness to non-majors.

Indeed, the notion of a broad general education has generally been highly honoured in study after study by faculty committees, before being sacrificed on the altar of expediency by Senates and administrations driven by the need to provide the greatest good to the greatest number – of departments, majors, disciplines and other organizational entities. The boldest of studies, recommending dramatic change in strategy for general education, are generally reduced to "distribution requirements" which resemble in some ways the standard Chinese menu design, "Two from Column A and three from Column B . . .". It seems reasonable to assert that all except the most able students are nearly as likely to get a broad liberal education from a random number table as they are from these distribution course lists, particularly given the criteria of selection employed by the average student – convenience, level of difficulty, charm of instructor, average grade and the like.

Gaining a liberal education in today's university is not really a problem unique to professional programs as these programs offer strong elements of what is necessary to such an education. As Dewey said:

> *To define liberal as that which liberates and to bring the problem of liberal education . . . within the domain of an inquiry in which the issue is settled by search for what is actually accomplished . . . we must use the resources put at our disposal alike by humane literature, by science, by subjects that have a vocational bearing, so as to secure ability to appraise the needs and issues of the world in which we live. Such an education would be liberating not in spite of the fact that it departs widely from the seven liberal arts of the medieval period, but just because it would do for the contemporary world what those arts tried to do for the world in which they took form.* (1956)

Two Models of Curriculum Choice

Since most people have not the time, money nor inclination to stay in school forever, undergraduate curricula involve many hard choices. In earlier times there was no real question as to who should make those choices. The faculty, in its knowledge of subject and wisdom of age, would choose. The model of curriculum choice was normative and prescriptive. That is not, however, a model that sits well with the mass culture in which most education is now so completely embedded.

The mode today of mass culture is one of consumer choice and the most constructive way of thinking about that model of choice is marketing. The basic tenet of marketing is that the reasoning regarding a product or service begins with consumer needs and preferences. The *New York Times* (Fonlund, 1993) recently noted that a growing number of universities have no core curriculum at all; different programs and majors each tailor their own requirements. In effect, the onus of requirements has been shifted to the department level. Since departments compete for students, there is effective institutional pressure for limiting requirements. Where no professional or occupational constraints are present, the result has been to reduce the level of control in the curriculum to a minimum and to raise the status of consumer choice to that of a virtue.

In 1945, Harvard College, in the famous "Red Book" (Anon, 1945) - could tell the world what it thought a liberal education was, though it could not enforce those views on itself. Today, former Dean Rosovsky, a principal author of the current Harvard core curriculum – described by some as "core lite" reflecting a judgment that it is too broad and poorly focused – can only say, "There is not one way to define an educated person. We have chosen one way – I am not

saying it is the only way." While curricula are often still presented in the prescriptive terms of an earlier time, the market has moved us in the direction of the relativistic world of consumer choice as the norm.

While maintaining as much control as possible in the old prescriptive mode, we have moved to a choice-filled curriculum which is reflective of the marketing orientation of our consumers. Perhaps it is time to consciously adopt a model, based on marketing realities, that is better suited to the contemporary world.

Marketing is about pursuing the consumer. Product design clearly must take account of consumer preference but it must also take account of achieving some goal. In a profit-oriented business, that goal is profit. In an educational institution it is the maximum number of educated graduates given available resources. The current abdication of control over the curriculum in many fields, particularly in the liberal arts, is analogous to ethical bancruptcy in business, to *choosing* not to have the structure required to achieve the organization's goals or to adulterating one's products. Perhaps universities need to review their approach in an effort to regain some measure of control over curricula. This would involve the element of marketing called promotion – which I define not as hucksterism but as persuasive communication. In a word, this implies selling students on learning.

Of course, professional faculties still *do* have significant control over student choice. In a market-driven world we have an incentive to offer our consumers entrance to a career. Thus, career-oriented programs are in a *better* position to offer a liberal education to highly motivated students than programs oriented to a more general education, which have had to adopt much more permissive curriculum choice guidelines in the face of consumer rebellion. Occupational educators can deliver this liberal education, however, only if the courses provide both the professional content which motivates students to achieve *and* the elements of grammar, rhetoric, logic and quantification which are a necessary part of a liberal education.

There is an important requirement, however, if we are to achieve the promise that has lain hidden in professional education for so long. That crucial requirement is a faculty who are educated broadly enough to recognize and seek to provide students with both the credentials they seek and the more broadly gauged education they will need in a lifetime career – and, most probably, a lifetime of career change. These more broadly – gauged abilities are the ones most employers actually seek in employees who can thrive in the continuing process of job change, training and promotion.

Faculty Development

The present route to becoming a faculty member in most professionally-oriented programs is some combination of field experience and postgraduate education. Significantly, the educational component of the faculty member's preparation is in their own field or a related field. For instance, someone who earns a bachelor's degree and status as registered nurse and who then earns master's and doctoral degrees in nursing education is clearly competent in the specialty.

The question arises whether such narrow specialization of preparation can be expected to produce faculty members who are likely to design programs and courses which are sufficiently broad-guaged to deliver the wider experience and background that education ought to provide. In my own field, programs of doctoral study are proliferating rapidly, staffed largely by faculty who have concentrated their life experience and education in either hospitality management or the closely-allied field of business administration. While these doctoral programs are in some ways a welcome development, I wonder if there is not also a need for a program at the doctoral level designed more generically for educators of practitioners.

Perhaps an institution such as The Ontario Institute for Studies in Education, which accepted candidates who had a developed competence in a field of practice, and who wished now to pursue positions of leadership in professional education in their field,could blaze a trail, responding to a critical, if largely unnoticed, societal need. Such a program, tailored to a large degree to individual needs, could nevertheless bring together students who shared a common concern with the design and implementation of pro-

fessional education programs. Significantly, a properly-constructed program could prepare educators of professionals to be more broadly-guaged educators of people, as well.

Why Bother?

I begin, true to my roots in educating practitioners, with practical reasons. The skills of the more broadly-educated person who can conceptualize problems and solutions, reason to conclusions, and communicate effectively in what has been called a society of organizations, is the more highly-prized person for employers. These are practical, long-term *survival* skills in an uncertain, if promising, world; they heighten the likelihood of a rewarding career and a meaningful life. There are, however, less individualistically selfish reasons we should consider.

With the high degree of popularity of professional education and its continuing growth in enrolments, as well as the professionalization of liberal arts taught for specialists, we do really face the possibility of a world of highly-educated, specialized "technoids". It is useful to recall at least one of Albert Speer's messages in *Inside The Third Reich*. He says, in effect, that he and the other talented technocrats of the Hitler generation could solve all the problems of "how to" but had no answers as to "why". Since, in many ways, the occupationally-oriented curricula of North American higher education were copies from the technocratic designs of the German universities that educated Herr Speer, his experience may be an especially telling parallel for our time.

The future envisioned by Gibson, Sterling and other "cyberpunk" authors of a technologically sophisticated but morally anarchic society, is not an entirely unrealistic projection for a civilization made up of a highly-educated people accustomed to governing their own affairs but lacking central principles on which to base that governance except self-interest and self-gratification. For whatever reason, selfish or idealistic, those of us who educate for work need to recognize the importance of a liberal education, including its moral basis in Judeo-Christian traditions for our students and for our society's future. Perhaps it is time for those concerned with faculty formation to give some thought to the long-term implications of overspecialized faculty in professional programs.

References

Anon, (1945) *General Education in a Free Society*. Cambridge: Harvard University Press.

Cellis, W. (1993) College curriculums shaken to the core, *New York Times*, Jan. 10, Section 4A, pp 16-18.

Dewey, J. (1956) *Philosophy of Education*. Ames, IA: Littlefield Adams.

Dewey, J. (1966) *Democracy and Education*, New York: Free Press.

Fonlund, Paul (1993) A school that does without, *New York Times*, Jan. 10, Section 4A, pp 19-20.

Glazer, N. (1977) Education beyond the economic model. In T. Powers and J. Swinton (Eds.) *Educating For Careers: Policy Issues in a Time of Change*. University Park: The Pennsylvania State University Press.

Work and Education: The Perspective of the Employer

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Redmond and Associates

Introduction

In this paper I discuss education for managers from the perspective of the employer. First, I share with you the ideas of senior management from Pizza Hut Canada regarding the relationship between education and an organization's management team. Second, I describe some of the educational issues Pizza Hut Canada is now grappling with. Third, I discuss my own views on this subject as well as what shaped this perspective. I then look at some of the challenges within the educational system which require attention and offer some possible solutions for consideration.

Importance of Education

Twenty one members of upper-middle to senior management of Pizza Hut were surveyed, in written format, for their views on education.

In response to the question, how important is formal education in the individuals you hire for management positions, nine responded extremely important; nine very important; three important; and none somewhat important or irrelevant.

Whatever the criticisms of the educational system, a credential from a postsecondary educational institution is still highly valued.

When asked "Why?" in order to clarify the response, the answers reflected certain themes:

- Education indicates intelligence, thinking capacity, and the ability to persevere.

- At Area Manager level . . . a university education is a "rounding" experience; better (usually!) social skills, more well-read; wider interests, greater intellectual curiosity.

- It gives me an early indication of commitment, sticking with something, independence at times and exposure to authority, coping with performance pressures. Gives younger people a chance to grow up and mature in a structured environment.

- It demonstrates a commitment on the person's part to personal, continued development and growth.

- I believe that in most cases it is a good barometer of intellectual stretch.

- At a Restaurant General Manager level (and above), education provides individuals with tools to grow and to develop.

Interestingly, the majority of responses speak to the intangible, non-measurable outcomes of education. Commitment, intellectual stretch, broader perspective, better social skills, a sense of "lifelong learning" are all affective outcomes versus technical skills. Pizza Hut Canada invests signifcantly in evaluating the technical skill areas which require development and provides on-the-job training, whether through in-house or external courses.

To try and capture these thoughts as succinctly as possible, the description may well read:

> *What is critical to the success of the individual is good raw material; the ability to take feed-back and grow; the intelligence to put parts of the puzzle together and form*

conclusions and strategies as well as be a gracious and appropriately contributing part of the team throughout the process.

From the financial department, the response indicated a critical eye to technical outcomes:

- Depending on the position, formal education is essential to handle the technical accounting aspects of most managerial positions. Understanding of the mechanics of accounting and regulatory requirements comes primarily from formal education.

- The skills Finance requires are technical in nature and can not be effectively learned "on the job".

- For our area (Planning) strong technical knowledge of financial theory and practice is required to do the basics of the job. The application of this knowledge to the business enhances the individuals performance on the job.

- People in Planning need sufficient technical training in financial analysis to perform routing functions.

These four quotes are the only ones which mention technical skills. It would appear that in departments which work with systems and the processing of data, interpersonal skills are secondary to the technical requirements of the job.

The largest employee group in our company is the "Restaurant Operations" division. "Operations" refer to the individuals who supervise and manage the Pizza Hut restaurants. The work is multi-faceted and the most significant area of expertise is refered to as "Interaction Skills".

Qualities Sought

A number of qualities were sought in future managers besides formal education. The consistency among respondents was remarkable; traits identified included the following:

Self-sufficiency, initiative, good judgement, decision-making ability, planning and organizational skills, leadership, interpersonal competency, intellectual strength, ability to apply intellect to the 'real world', interpersonal strength, integrity, commitment, education, drive, common sense, intellect, intelligence without arrogance, confidence without defensiveness, social/people skills with a genuine desire to lead by making their lives better/more rewarding, results orientation, personality, positive team member, energy/enthusiasm, commitment, personal expectations of themselves and us, ability to be creative/add value, smart, disciplined, organized, leadership, fit within the style and personality of the organization, good interpersonal skills (work in groups), integrity, high ethics, preparedness to work hard, desire to succeed and develop communication skills, knowledge of industry, listening and coaching skills, results orientation, brains and breadth of character, the ability to learn and apply themselves plus experience in the function, results orientation, track record, (high) energy level, social/people skills, creativity and responsibility.

It is important to note several significant themes. First, there is no mention of the need for technical skills, although in areas other than Operations they are a "given". The focus is clearly on the personal characteristics of the individual. One can summarize these pertinent comments:

Wanted: A bright, confident, well-rounded person who knows when and how to listen, when to offer an opinion and is sufficiently skilled to do so appropriately. A person who is clear about what they want out of life and is committed to growth while achieving their goals in conjunction with the corporate goals. A person who is organized, disciplined, hard working and honourable. A person who can think creatively and has the knowledge and intelligence to think analytically as well as the confidence and courage to stand up for what they believe.

Developing Human Resources

The Training Department is often asked to

provide supplemental courses to meet the needs of the operation group. The courses most frequently required are: personal organization, time management, communication and analytical thinking skills. These courses are in addition to interpersonal skills, performance management and leadership courses which are offered on a mandatory basis. The participants in the supplemental courses are most frequently not university graduates.

Pizza Hut Canada realizes the necessity of providing formal educational opportunities for our Operational people, as existing programs are not sufficiently flexible from a structural perspective to meet the needs of people who work in restaurant operations. We are working with a Canadian university to develop a Bachelor's degree program which will be offered in non-traditional delivery modes which will respect the time-line demands of management persons in the hospitality industry as well as their proven abilities. The implementation of this program will reflect senior management's confidence in University credentials as well as develop the skill and knowledge base required in our operational management workforce. The educational partners in this endeavour recognize that there is a significant industry-wide need for such a program in order to strengthen the professionalism of the industry and the confidence level of its constituents.

Pizza Hut Canada has also committed to work with the Ontario Tourism Education Council (O.T.E.C.) to provide basic level service and hospitality training for our junior level of management Shift Managers. This is a one-year in-college and on-the-job training program administered through a local community college. As some of the participants in this program are not high school graduates we are firm in our demand that the graduates of this program be granted advanced standing in a community college hospitality program, a request that has been honoured.

Another issue important to Pizza Hut Canada is to be astute regarding the use of external courses. There is a plethora of expensive, upscale, extended, executive training courses available both through universities and independent organizations. If the person attending the course is working towards a degree and the course is in a related subject matter we believe that there should be the opportunity to receive credit for this course.

Need for Change

The educational system needs to meet business half way. In resonse to the question, "If you could give one message to the educational community, what would it be?", managers responsed as follows:

- Toughen up the standards and be relentless in demanding excellence
- Basic, generic skills are critical. Keep a broad, global perspective in the theory and make the application very current and topical
- Avoid specific sectoral skills as they are taught in the workplace
- Work closely with the workplace that they are serving in order to support the needs of business. Understand that workplace is the customer
- Learn how to teach
- Promote "common sense"
- Deliver the message that learning is for life
- Integrate computer skills into every aspect of the educational environment.

The message is clear: Deliver a broad education with an eye towards affective and cognitive learning outcomes. Develop and maintain high standards and do not bend. Provide coaching, development, and support through good teaching. By demanding excellence from students, develop their self-confidence. Be truthfull with students. Help them to develop interpersonal skills. Deliver constructive feed-back. Graduate only those individuals who possess adequate communication, numeracy and computer literacy skills.

My view on education is from the perspective of an employer interested in the effect of education on the individual. Having an education in the hospitality field from the college or university system is an asset. It indicates that a person has not "opted out" into this industry, but has consciously chosen the field. It indicates that the person has a sense of where they are within the field and where they can expect to go, both

from a career perspective and in terms of continuing formal education. Clearly, this spells a level of commitment to the hospitality industry.

On a technical level, there is a difference between a college graduate and a university graduate. One of the strengths of the college system is that the college graduate knows they have to get into the trenches and physically work hard to be successful. "Hands-on management" is a clear, firm requirement.

There are, unfortunately, weaknesses within the college system. Many students in the community college system have neither English nor French as a mother tongue. It is possible, therefore, for a student who cannot communicate clearly in the English language to be a college graduate. Written skills are an additional area of concern. Colleges are in the unfortunate position of trying to maintain high enrollment levels and at the same time maintaining high standards while applicants possess inadequate skills.

We return to the question of what community colleges should do for a person.

Perhaps this must be a guarantee of the "basics" or the "generic" skills: that the person can read, speak and write in English, possess basic numeracy skills, do work on time with an acceptable standard, possess life skills to function effectively, solve problems, possess a good work ethic, and good interpersonal skills.

A great deal of the advice of senior management, particularly around standards, applies to the community college system.

University graduates appear to have a greater sense of confidence. It is difficult to assess whether their confidence springs from their ability to commit and achieve in the formal educational arena, from their courses of study or the impact of other socio-economic issues. In our courses these students appear to possess a broader scope and are more likely to challenge the *status quo*. These observations support senior management's positive view of the benefits of a university education.

An interesting point to note is that in the Operational setting both community college graduates and university graduates start at the same entry level position, although at a different level on the pay scale. For the university graduate, however, there are greater expectations and opportunities for advancement.

And what of hospitality training as a discipline? There are only three universities in Canada which offer hospitality training so clear differentiation at this level is possible. There should also be clear learning outcomes for the hospitality programs the 19 community colleges which offer this area of study. The College Standards and Accreditation Council (CSAC) Hospitality Project, is currently working to define appropriate learning outcomes of two- and three-year programs. The colleges will then have an opportunity to supplement the core with their own niche courses. This initiative is necessary:

- for students to know which course is the best one for them
- for teachers to have defined learning outcomes for their courses
- for colleges so that they can communicate with each other
- for industry to be able to know the capabilities of the graduates of the programs
- for colleges and universities which will be able to articulate courses and programs
- accountability will be clear and measurable.

Another issue regarding CSAC is that it has mandated that 70% of the required courses be either general education courses or generic skills courses. Clearly, community colleges are being asked to become mini-universitities versus Institutions where technical skills are taught.

In the expectation of more collaboration between education and employers, the following suggestions are offered:

- admit students into hospitality programs who have adequate language, numeracy skills for the program
- ensure that advisory committee members are a fair representation of the industry they are serving
- ensure teachers of practical skills provide tangible, measureable avenues to update the currency of skills taught

- require subject specialization
- require workplace partners for each teacher
- require teachers to be involved with industry associations which support their subject area
- ensure teachers oftheoretical classes have some proof of work and research in their areas as they relate to business
- include creativity, entrepreneurship and Canadian content in the curriculum
- require teaching skills, a formalized, structured program offered either internally or externally that is completed in the first several years of teaching
- carve out an institutional niche rather than compete with other colleges/universities
- provide educational opportunities; make the system user-friendly; let students know their options
- raise standards
- be available to coach and mentor students
- have students sit examinations on the content of the courses or complete other assessment activities
- take advantage of the international nature of the industry by having an exchange program.

Postsecondary education is valued by employers. To capitalize on this support, the community college system must have a clearly defined mandate and become better articulated with the university system. Universities will hopefully pay more attention to the affective outcomes of educational process while guaranteeing a broad education. We all need to work together for the betterment of the industry we are serving. There are still challenges to be met.

Education and Work: A Graduate's View

Dianne Hounsome
Bayview-Wildwood Resort

I am going to present my perspective, as a graduate of University of Guelph's School of Hotel and Food Administration, of how my university education prepared me for the workforce.

Today, I will first discuss the different aspects of my university education; what information and skills I mastered and the process by which I studied them. I will then describe the type of work I am involved in. Finally, I will consider my education together with my work and reflect on which educational aspects were important to my effectiveness in the workforce.

Education

In order to explain my choice of a field of study, I will first briefly describe my background.

My family, the Stantons, reside in Port Stanton which is essentially a resort district located between Orillia and Gravenhurst on Sparrow Lake. Since the late 1800's, the Stantons have been involved in a family resort business.

As such, as I grew up, I worked through most of the areas of the resort business. It was therefore not a big surprise when I decided to enter the School of Hotel & Food Administration (HAFA) course at the University of Guelph.

I chose this program as I was looking to improve my business and management skills and further diversify my work experience. The Bachelor of Commerce degree also appealed to me.

Let us first consider what information and skills I gathered while in the HAFA program.

In my first year in the program we studied: basic theory of economics, microbiology, sociology, psychology, chemistry and an introduction to the hospitality industry.

My second year presented more courses that were hospitality-specific or at least slanted to the hospitality industry. My courses covered: accounting, computers, law, statistics, economics and courses that taught food and beverage purchasing, control and even how to butcher meats.

Third year was comprised mostly of management courses, including hospitality operations, personnel and marketing management. This year our class was also responsible for the operation of a small restaurant on campus. Every class member was on a team that was in charge of one meal – from menu planning to service of customers. Another course taught the principles of facility design, particularly foodservice operations.

Fourth year was our last chance to soak up university-imparted knowledge. This year, once again, there was a slant towards management and planning courses. Mixed with these, however, I chose other courses of special interest. I learned the management and planning of hotel and foodservice operations, including the financial management of same. I also learned how to speak publicly (although I think I have forgotten all I was taught), distinguish between different management styles and maintain a physical plant. A personal favourite of mine was the course that taught us to appreciate wines through wine tasting – we also learned of the history of wines and how to make alcoholic beverages.

Well, that is a synopsis of all the university courses I took. The majority of them were HAFA courses, quite a few were Management Economics courses, and a very few were general Arts and Sciences courses.

To adequately cover what I learned while at the University of Guelph I must include my social education. Living away from home with your peers is quite a learning experience. I learned how to react appropriately in many social situations. I also became involved in Student Government which taught me a great deal about organizational behaviour and rules of governing meetings.

Let me turn now to the process by which I studied this wealth of information and skills.

The professors and instructors made use of many different teaching approaches to impart their course material. As my years of schooling increased, so did the complexity of the methods of teaching. For the first couple of years, memorization of details listed on overheads, in books or on hand-outs was the most prevalent form of instruction. Intermixed with this was the use of projects, essays and research papers to enrich our learning experience.

Some courses demanded more practical, hands-on learning. For example, running an on-campus restaurant in third year required the student to take the role of cook, server and dishwasher throughout the semester. An Animal and Poultry Products course in second year had us butchering a cow and in third year we had to draw bar and kitchen designs.

In my last two years of university, most of my management courses were taught by the case study method. This method incorporated real-life situations where a decision had to be made. The student is put into the role of the decision-maker and is responsible for determining and considering all the relevant information in order to make a sound decision. On most occasions, the students worked in groups when analyzing these case studies. The student then had to present and defend his position in class.

Work

Let me consider, now, the work roles I have been involved in and try to relate them to my education.

After graduating with distinction from the HAFA program at Guelph, I was thrust into the workforce.

For my first year of work I was, in effect, still within the university fold. I was hired for a one year contract to write case studies for the Hospitality Management Development Course (HMDC) which is offered to executives in the hospitality industry every spring by the HAFA School.

The following summer, 1987, I returned to Port Stanton to assist in the management of my family's resort business. Bayview-Wildwood Resort is a year-round convention and family vacation facility. The resort has 80 units and a host of indoor and outdoor facilities suited to summer and winter sports.

Since 1987, I have directly managed many departments including; dining-room, bar, office, housekeeping, accounting, conference services, recreation and entertainment.

My father, older brother and myself are the shareholders of the company. My brother is General Manager and I am Assistant to him. Also involved in the family business is my uncle, who is our Sales and Marketing Manager and my sister-in-law, who heads up Personnel and Recreation.

At this time, I am actually off work until May as I have six month-old twins at home (a boy and a girl). I can honestly state that my education did not prepare me for raising twins!

Coupled with work at the resort I have undertaken volunteer work in tourism associations. I was President of Georgian Lakelands Tourist Association, an OTAP, during its major upheaval and structural change. I am currently Treasurer of the Motels Ontario association which is very active in lobbying both levels of government for the tourism industry. I am also on the Board of Directors of the Orillia and District Convention and Visitors Association (ODCVA).

Education for Work

I have discussed my education; what and how I learned, and I have generally discussed my work at Bayview-Wildwood Resort and other volunteer activities. I now have to answer the

question: What did I learn at university that helped me to be effective in the workforce?

I feel there were two very broad areas of skill I learned at university (and am still learning now) that are invaluable to me in my work; one, how to deal with many different people in varying situations and two, how to make an informed decision.

I will discuss the people skills first.

Dealing with people effectively is essential when you are a tourism professional. I am constantly interacting with our guests, our staff, my family and my industry peers. I have to be careful and consistent in my dealings with all parties mentioned as we are in the people business. If I treat our staff poorly, they reflect this in their service of our guests. If our guests are not treated well they, and the ten more people they tell of their bad experience, will not frequent our resort.

I interact with my family in business every day. We have to work together to achieve goals for the business in both the long and short term.

In my volunteer work I deal with two dynamic boards of directors, all with different ideas, experiences and personalities. In order to represent the tourism industry effectively, our boards have to achieve consensus over many tough issues. As such, people skills is very important in the role of a director on a board – especially if you are on the executive.

How did my education help me with my people skills?

The content of my courses at university was not the major factor that improved my people skills; it was the process by which I studied the course material.

The case study method of instruction forced me to work with three to four other people to present an informed analysis of a situation. This was a difficult endeavor as the group had to consolidate varying ideas and utilize individual strengths and weaknesses to present a decision that could be argued effectively.

Most of my courses required the production of projects, essays or presentations in the pursuit of teaching the course material. As such, my written and oral communications skills were developed. Communication skills are crucial in any business. Knowing how to deal with various people doesn't help if you can't properly communicate your intentions.

My work in the HAFA student government introduced me to the rules of meetings, the positions in an executive and board and the dynamics of a governing group of elected volunteers. I learned a great deal by being part of this organized body that has helped me in later years as an active board member.

Knowing how to make an *informed* decision is also a necessary tool as a manager in any business and is the second broad area of skill I acquired while attending university.

I have qualified the word "decision" with the word "informed". This implies knowledge of all the relevant information surrounding the situation that requires a decision. Understanding the process by which a decision-maker identifies a problem, gathers information, analyzes the relevant facts and makes a decision is crucial to effective management.

Like people skills, the process of making an informed decision was developed mostly through the instructional methods used for my courses. However, the course content was also a factor in increasing my awareness of information to be analyzed and my ability to process that information.

Once again, the case study method of instruction was instrumental in introducing a methodical, effective process of making a decision. The decision could be on anything; from deciding which flowers to put on the dining-room tables to deciding on how to prioritize a list of capital improvements required over the next five years.

The course content played a role in this process as every new piece of information I learned could be used in an analysis of relevant facts for a future decision. For instance, at university I learned accounting procedures. If I was

making a decision as to whether or not to build an outdoor pool and licensed patio at our resort, I would use this information to project the revenue and expenses of such an endeavor. However, if my decision was concerning whether or not I should dismiss a marginal employee, this accounting knowledge would not be required.

In my experience to date, I can recall only using the course content from a few courses in my decision-making. I have utilized the following course material: Accounting, Financial Management, Marketing Management, Facility Design (I can now read blueprints), Computer Applications, Beverage Management (I developed a wine list), Physical Plant Management and Food and Beverage Control. As you can see, most of these courses are not industry specific.

I still maintain, however, that the most important factor in making an informed decision is knowing what relevant facts to consider. As a manager, I can always be advised as to the details of a situation; the trick is knowing what to ask for.

In closing, I will re-emphasize my belief that my effectiveness in the workforce has been shaped by the instructional methods employed by my university educators. To be specific, I fully promote the case study method of instruction as I feel it helped develop my ability to deal with people and make informed decisions in varying situations. Overall, I feel that my university experience, including classes, social experiences and work in student government, helped widen my horizons by immersing me in new ideas and perspectives.

Community-based Education for Career, Work, and Life

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Introduction

Schools cannot meet the needs of students, their parents, and the larger community unless they address in a serious and consistent way the need of students of all ages and backgrounds for education about the kinds of work, paid and unpaid, that engage the people in their community. We propose a model of career education called Community-based Education for Work, Career, and Life (CWCL), which is developmental, curriculum-integrated, and community-integrated.

Sharing the Work

Students, parents, and the business community have been telling educators for a long time that they are not satisfied in how we prepare students for the future.

According to a recent survey of Canadian youth, a major concern for 15- to 19-year-olds is uncertainty about what they will do when they finish school (Poterski & Biddy, 1988).

A study in a Metropolitan Toronto school board showed that students consider career planning to be much more important than do their teachers, guidance counsellors, and administrators; thus, while career-focused programs made up only 18% of school-based guidance programs, they constituted 75% of the most-used programs (Forsyth *et al.*, 1984).

In a 1990 poll of Canadian adults by the Canadian Education Association, a majority of respondents gave schools high marks for effectiveness of teaching staff, and for responsiveness to parents' concerns. But only 8% of respondents in Ontario said schools deserve an A for their efforts in preparing students for the workforce (Williams & Millinoff, 1990).

We constantly hear from business, industry, and government that students are not being trained adequately for the high-tech jobs and repeated career changes of the future. What might have been marginally good enough for yesterday's students, by way of career preparation, is completely inadequate today.

As well, there is strong social pressure for greater equity of access to career opportunities, such that more females, visible minorities, children of economically disadvantaged parents, and physically challenged students are able to acquire occupations which are associated with higher earning power, more security and prestige, and higher job satisfaction. A first step to access is knowledge and exposure, and schools are viewed as the place

where this first step must be taken – but often isn't.

Educators respond defensively to this dissatisfaction. "They" don't understand how hard "we" work, how crowded the curriculum is, how few guidance counsellors we have, how many difficult students we work with, and so on. All true, but unlikely to result in a useful discussion of how we can better meet the need for all students to know the full range of opportunities available to them after high school and how they can access those opportunities.

It is time for teachers and administrators to share ownership of this problem with their students, the parents, and the community at large. It is the job of schools to help students understand the world around them, beyond the classroom walls. This world includes both paid and unpaid jobs, occupations, and careers. The task for teachers is to ensure that all students learn about and appreciate the vast array of possibilities available to them.

Not only is the time right for such an approach, but teachers stand to gain a great deal of personal satisfaction in the expansion of their own experience and knowledge which will come from helping their students interact with adults in a range of environments. The relevance that the career connection provides will enhance teachers and teaching as much as it affects students and their learning.

Working Toward a Common Ground

Teachers have been slow to modify their curriculum to make it career-relevant. Occasionally there is some classroom discussion about why mathematics is important, or how science is crucial to understanding the world. But these activities are infrequent and inconsistent across teachers and subjects. Teachers have not been taught to create subject-career connections, and administrators by themselves cannot help them. The expansion of cooperative education in the secondary schools required some teachers to learn about their communities. Now it is time that this expanded knowledge base be extended to all teachers – not just co-op teachers, not just tech teachers, and not just secondary school teachers.

Students of all ages and backgrounds have a natural interest in what their parents, relatives, and family friends "do" all day. Educational research informs us of the importance of parental and family involvement for students' academic success. Why not then involve parents and caregivers in assisting schools in the essential job of making careers visible and accessible?

Educators need the help of non-educators; schools need the people in their community. Community schools become a reality when teachers realize this need. A Grade 4 teacher cannot easily comprehend or link her students to the range of work that is done in a museum without the assistance of the people who work in a variety of occupations there; a trip to the museum that leaves out those people and their work is a missed opportunity. The contacts that the teacher needs can often be facilitated by parents and supported by school administrators. The job of adjusting curriculum in schools is constant, and nothing new; it is a matter of extending the scope of curriculum to incorporate career/work relevance.

Some Working Principles: CWCL

The value of a set of principles is that they make it possible to begin to articulate a shared belief, and thus to guide policy, programs, and teacher training. When priorities are stated, when programs are chosen, when teachers are trained, there is then the possibility of a common understanding of what we are trying to achieve.

Because, historically, the place of career education in the educational agenda has not been clear, teachers, administrators, students, parents, labour and business leaders therefore do not share a common understanding about the purpose of schools with regard to the preparation of students for adult life. This lack of a shared belief has produced a patchwork of programs that rarely meet the needs of students or society.

We propose a set of guiding principles for career education which reflects the concerns of the many stakeholders and which aims to prepare students for a deeper understanding of the opportunities open to them in an increasingly complex society. We talk about career education organized around these ideas as Community-

based Education for Work, Career, and Life (CWCL).

CWCL Principles

1. Career education goes beyond the provision of information about jobs and the world of work. As students progress through school, the traditional career planning process is typically confined to the provision of information about specific occupations. This might involve occasional job site visits, speakers, an annual careers fair, and distribution of literature.

Career education must be broadened to show students the variety of opportunities that are associated with a work environment, project, or issue important to society. For example, through the investigation of a topic such as hazardous waste management, students might meet engineers, technicians, union representatives, environmental lawyers, politicians, urban planners, chemists, and government regulators. By participating in these kinds of worker-centred and curriculum-integrated activities during their school years, students will more fully appreciate and understand the multifaceted aspect of occupations and the many ways in which their own interests and abilities could be applied throughout their working lives.

Career education conceived and delivered in this way addresses equity issues in two important ways: by valuing everyone's work and family, and by making career paths open equally to all students.

2. Career education is part of the total school curriculum, rather than a subject taught in isolation. Career education should encourage students to see the relevance and connections among subjects. Through the study of history, for example, students can gain some grasp of how economic events and trends affect present and future patterns of work and society. Similarly, knowledge of geography can help students better understand the connection between environmental conditions and different social and economic opportunities. Site visits and speakers can help to give a concrete, human reality to the ideas students have been discussing.

This kind of career education depends on teachers in all subject areas who understand the needs of all students (including those heading for university) to be able to relate what they are learning to their future as workers. Of equal importance, is the degree to which such integration will serve to motivate students (including those who are not university-bound) to stay in school and apply themselves to learning.

3. Planned out-of-classroom experiences, beginning when children enter school, are integral to career education. The best way to understand the world is to be a part of it, and this can be accomplished for students by provinding them with as many opportunities as possible for meaningful out-of-classroom experiences. These activities offer a natural way of exposing children to their community and to the larger world, and capitalizing on their native curiosity. Such a curriculum also represents the key to the process by which a school can establish close and reciprocal links with its community.

There are many ways in which schools can build ongoing, out-of- classroom experience into their program. One school might choose a different job site for exploration in each succeeding year: a zoo one year, a hospital the next. Another might decide that students will explore the range of jobs that parents and others do in the local community – in libraries, shops, offices, and factories. While these experiences do not and should not have specific career path implications early in the educational process, it is important to explicitly incorporate career investigation later on. Cooperative education, community service, job site visits, job shadowing and youth service are examples of ways in which we can increase young people's understanding of the world outside of school.

4. Schools have the responsibility to address the career as well as the academic dimension of children's lives. Traditionally educational curricula and assessment address only academic and social skills. Occasionally career/work orientations are taken into account if a secondary school student is regarded as a candidate for something other than a university education.

Career development is as important as academic and social development for all stu-

dents, and must be equally represented in program planning and evaluation beginning in the early years of school. The whole child, including their aspirations, interests, and career exploration skills must be considered if we are to plan educational programs which are effective in addressing students' needs. Career education is developmental, in the same way as literacy or numeracy education; it must begin early to satisfy a child's natural curiosity and the need to know about the world and how it operates.

5. Community involvement and support are essential for career education to be successful. Schools cannot go it alone. If career education is to be reality-based and effective, its implementation requires the support of a range of resources both within and outside the school. Business, industry, labour, government, other educational institutions, and the community of parents and neighbours all need to be partners in new and creative ways.

We emphasize that the essence of more effective career education is not simply the inclusion of more out-of-classroom experiences. It is that such experiences be planned and incorporated systematically into children's education, beginning in the early grades and continuing throughout secondary school, regardless of the student's subject specialization or postsecondary plans.

Community experience must become an integral part of students' educational lives. The goal is the accumulation of an experience bank, so that when students are at an age to begin to make decisions about their future, they will be equipped by a broad background of exposure and understanding to enable them to make suitable choices and plan more productive and satisfying futures. And a not inconsiderable "secondary gain" should be a healthy knowledge of and respect for the extraordinary range of human effort and achievement on which all of our communities are built.

Conclusion

The provision of adequate career education represents a significant area of disagreement between students, parents, and the business and labour community on the one hand, and school-based educators on the other. Teachers and school curriculum planners have given much less attention to curriculum-integrated, developmental career education for all students than the public has been asking for.

Good career education, based on planned, systematic, community-based exploration of the world of work, provides the opportunity to involve parents, to link the school to the community in a real and reciprocal way, and to motivate students to apply themselves to their studies, at the same time that it meets the articulated needs of the public. As well, it has the potential to enrich the everyday school experience of students and their teachers in a meaningful and practical way. Finally, it addresses a fundamental equity issue, of equal and informed access to solid career information and exploration.

The opportunity to better address student career opportunities and needs through a genuine school-community linkage is one our society can no longer afford to ignore.

References

Forsyth, K., Macfarlane, J. & Crawford, P. (1984) *Assessment of Guidance and Counselling Services in North York*. Toronto, Ontario: North York Board of Education.

Posterski, D. & Bibby, R. (1988) *Canada's Youth, "Ready for Today": A Comprehensive Survey of 15–24 Year Olds. Ottawa, Ontario: Minister of State for Youth.*

Williams, T. & Millinoff, H. (1990) *Canada's Schools: Report Card for the 1990s: A CEA Poll*. Toronto, Ontario: Canadian Education Association.

Life Roles, Life Chances and Career Education:
The Equity Imperative

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The educational and popular literature are replete with ideas of what the primary purpose of education should be. These range, on the one hand, from the instrumentalist view that education should prepare individuals for the workforce to the more lofty view that education should assist in the creation of a more just and harmonious society. To my mind, attempts to isolate the quintessential purpose of education are indeed futile and unnecessary as education serves multiple essential purposes, not the least of which is to prepare students for a productive and self-sustaining role in society.

The primary thesis of this paper is that career education, an aspect of general education, can enhance the life roles and life chances of students. Career education should become an equity imperative for all those who are currently engaged in the educational enterprise. This includes not only educators but also the key partners and stakeholders such as parents, business, labour and industry.

The urgency of this mandate is heightened when one reads the futurist literature which paints a picture of what society and the world of work will look like in the 21st century. In his most recent book, Post-*Capitalist Society*, Peter Drucker (1993) states that every few hundred years a dramatic transformation takes place which greatly affects society. His view is that:

> *We are clearly in the middle of this transformation; indeed if history is any guide, it will not be completed until 2010 or 2020. But already it has changed the political, social and moral landscape of the world. No one born in 1990 could possibly imagine the world in which one's grandparents . . . had grown up, or the world in which one's own parents had been born* (p. 3).

> *The one thing we can be sure of is that the world that will emerge from the present rearrangement of values, beliefs, social and economic structures, of political concepts and systems, indeed, of worldviews, will be different from anything anyone today imagines . . . and it is certain also that its primary resource will be knowledge* (p. 4).

Drucker continues to reinforce his point by stating that the basic economic resource, otherwise known as "the means of production", the term used by economists, is no longer capital or natural resources (the economist's "land"), nor "labour". *"It is and will be knowledge"* (p. 8).

The report from the Economic Council of Canada (1992) emphasizes that employers are seeking more from the educational system, particularly when one considers the future of work in Canada. Higher levels of basic skills in literacy, numeracy and problem-solving are required for the jobs that are being created today than for the jobs that were created 10 or 20 years ago. Wirth (1992) also writes about the revolutionary changes that will take place in the future of work, above all "an electronically driven technological revolution . . ." (p. xvi); he highlights the need for a better-educated, flexible workforce capable of continuous learning.

What is Career Education?

The term career education has evolved over the years, beginning with earlier terms such as vocational education. Other terms, such as career development, are often used synony-

mously. Hoyt (1978), one of the earlier and more prolific writers in the field, defined career eduction as follows:

> *The totality of experiences by which persons acquire knowledge and attitudes about self and work and the skills by which to identify, choose, plan and prepare for other life options potentially comprising career; an effort aimed at refocussing . . . education and the actions of the broader community in ways that will help individuals acquire and utilize the knowledge, skills and attitudes necessary for each to make work a meaningful, productive and satisfying part of his or her way of life.*

Definitions of career education abound. Over the years, each redefinition of the term carried with it new metaphors and nuances. In any case, they all seem to converge on the notion that career development is a continuous and lifelong process over one's lifespan which include themes such as self-awareness, career awareness, exploration, choice and adjustment, decision-making and employability skills, to name a few. As well, there is a clear recogniton that it requires the assistance and co-operation of parents and the business community to enrich and validate the process.

As an instructional strategy, career education has the potential to improve educational outcomes. Students are able to understand the relationship between learning and earning. Career education extends their academic world to the practical world of work. The activities are gradual and cumulative, beginning in early childhood when they learn about the many workers in their neighbourhood – the firefighters, police officers, bus drivers, nurses and doctors, to name a few, and the inter-connectedness of these workers in society.

Herr and Cramer (1988) state that in the early 1970s, the U.S. Office of Education formulated a series of eleven conditions that allegedly justified the educational reform through the medium of career education. Some of these justifications were as follows:

1. Too many persons were leaving the educational system deficient in the basic academic skills required for adaptability in "rapidly changing society" (of the 1970's).

2. Both graduates and drop-outs failed to see meaningful relationships between what they were learning in school and what they would do when they leave the educational system.

3. Education, as structured, best met the needs of students who planned to attend university rather than those who planned to go directly to the work force.

4. Education had not kept pace with the rapidity of change in the post industrial occupational society, resulting in a mismatch between worker qualifications and job requirements. Over-educated and under-educated workers were present in large numbers, leading to boredom and frustration respectively, and contributing to the growing sense of worker alienation in the total occupational society.

5. Too many persons left the educational system, both at the secondary and university levels, unequipped with the vocational skills, the self-understanding and career decision-making skills or the work attitudes that are essential for a successful transition from school to work.

6. The growing need for and presence of women in the workforce has not been reflected adequately in either the education or career options stereotypically pictured for girls in the educational system.

7. The growing needs for continuing and recurrent education on the part of adults were not being met adequately by the current systems of public education.

8. The educational system was not meeting the needs of minority or economically disadvantaged persons in the society.

It is interesting that even today, in Canada, we could employ many of the same observations as a solid rationale for increasing the attention to career education in our schools.

There is ample evidence that career edu-

cation works, not only by preparing students for the workforce, but also as a contributor to academic success. Evans and Burck (1992), in their meta-analysis of the effects of career education interventions on academic achievement, examined 67 studies. One of the findings was that reading and mathematics scores improved among students who had been exposed to career education. Indeed, where career education concepts were infused into the existing curriculum, it related positively to academic growth.

The Guidance Guideline (1984), outlines for Ontario schools, beginning in Grade 7, four primary aims of guidance programs. It states that the school should provide students with opportunities to acquire the skills, knowledge and attitudes necessary to:

1. know and appreciate themselves
2. relate effectively to others
3. develop appropriate educational plans, and
4. explore career alternatives.

This should be offered through a balanced program which comprises instruction and counselling. There should also be a mandatory 20 hours of guidance instruction in each of Grades 7 and 8. The duties of teachers, counsellors and principals in relation to the guidance program are clearly ourlined in this document. Teachers, for example, are required to relate their subject areas to occupations, giving students a sense of the relationship between what they do in school and the activities of the world of work. One of the requirements for principals is that they have a written guidance plan on file in the school. The Ministry states that this plan shall include:

1. the instruction, counselling, co-ordination, consultation, and liaison activities to be performed as part of the guidance program, and

2. a method of evaluating the effectiveness of the guidance program in meeting the current needs of students, teachers, parents and the community.

It is a pity that all schools do not offer, at this time, either a systematic program in career development or a career development course for students in the school. It is also unfortunate that, in many cases, existing career development courses are offered at the grade 11 level – before which many students drop out of school. Admittedly, some schools and school boards do offer exemplary programs. Principals, counsellors and teachers in these schools must be commended for their fidelity to the expectations of *The Guidance Guideline*.

In Ontario, cooperative education teachers are doing an excellent job of bridging the gap between school and work. They have certainly assisted students in their quest to "try out" occupations, learn the skills required in the workplace and see if there is a match among their interests, capabilities, values, aptitudes, dispositions and the other variables which are integral to the career choice process.

Educators are encouraged to recognize the benefits of a career education program and to implement such programs in a systematic manner, beginning as early as kindergarten. Of course, it is also important to get parents involved and to communicate fully the rationale, purpose and content of these programs and the ways in which they can help their children develop positive self-concepts – a prerequisite for realistic and accurate career decision-making.

When career education was first introduced, many were, at best, sceptical and at worst downright hostile to the idea, particularly in relation to the notion that such programs would be introduced at the elementary level. They equated career education with careeer choice. In fact, in the early years, the major conceptual organizers would be self-awareness and career awareness. At, best, they are in the "fantasy" phase of career decision-making process. During the transition years, career exploration would be one of the main foci. At this stage, students investigate a variety of occupations or clusters of occupations in terms of the characteristics and requirements of the occupations. The emphasis ought not to be on choice as we do know, based on the views of developmental theorists, that they are in the "tentative" phase of the career decision-making process.

Parents need to have an understanding of the many activities and factors which affect career decision-making (Glaze, 1980). The selection of courses in secondary schools, for example, do have an impact on future plans. As well, students who drop courses too soon, particularly the maths and sciences, can find that they cannot get into the occupations of their choice without further education. Guidance counsellors can assist students and parents in exploring what the requirements for future occupations and post-secondary programs are.

The Equity Imperative

Equity requires a commitment to fairness and social justice. It requires the identification and elimination of systemic barriers which limit the success and life chances of students. The policies, practices, programs and interactions within our educational organizations must reflect this commitment. There must be a commitment on the part of educators to provide quality programs and an insistence on excellence in performance for all students, regardless of race, ethnicity, gender, socio-economic status, special needs, second language proficiency or dialect, or any factors which locate individuals in society. The pendulum has certainly shifted from a focus on providing equality of opportunity to providing equity of outcome for students. As well, when we think of students in terms of their life roles and life chances, the notion of equity of well-being provides a challenge and a possibility as we prepare them for the future.

In order to achieve equity, it is essential that educators embrace the premises of Outcomes-Based Education (Spady and Marshall, 1991). The belief that all students can learn and succeed, that success breeds success and that schools control the conditions for success are fundamental to the achievement of equity in educational institutions. Outcomes-Based Education requires the focussing and organizing of all the programs and instructional efforts of the school around the clearly defined outcomes we want all students to demonstrate. As well the assertion by Gorman and Johnson (1991, p. 2) holds true:

> *We believe that human potential is our greatest asset and that there is no shortage of potential, only a shortage of its full and universal development. The school will surely get from its learners just the kind of learning results that it expects. To expect too little is to shortchange both the individual and society.*

There are many compelling reasons supporting the fact that equity must become an educational imperative. Canada spends more on education than most industrialized countries, and the federal government's consultation paper, Learning Well . . . Living Well (1991) states that our learning system has served Canada well in the past; that it is good – but not good enough, and that:

> *As the world moves towards a knowledge-based economy, Canadian jobs are threatened by a new kind of competition – low wage, low skill competition is being replaced by high wage, high skill competition. Although we are still successful exporters of energy and raw materials, Canada is losing ground to industrial competitors who are simply better than we are at inventing, designing, manufacturing and marketing. Our competitors will gain not by undercutting us, but by outsmarting us* (p. vi).

Immigration rates to Canada in recent years include a high proportion of visible minority members. Many urban classrooms represent the world in miniature. Parents of many of these students have expressed dissatisfaction with their success and retention rates in some our schools. These students are certainly able to learn and be sucessful academically. We must communicate high expectations to them and provide the support, mentors and role-models they need in order for them to achieve. And although we know that adjustment to a new country does incur many hardships, the failure rate of many of these students cannot be attributed solely to this process. In some cases, students born in Canada are not performing well. What we do know is that their life chances and ability to participate fully in this society are seriously jeopardized. Educators must ensure that all students perform at a level commensurate with their abilities. I will reiterate the point

that there are fewer places for individuals with low skill levels in our information and knowledge-based economy. It is also true that many parents are growing increasingly intolerant of any justification we may make for the lack of student achievement. In fact, Drucker puts it quite bluntly:

> *we will no longer accept the school teacher's age-oldexcuse for malpractice: 'the students are lazy and stupid.'With knowledge the central resource of our society, lazy students and poor students are the responsibility of the school. There are only schools that perform and schools that do not* (p. 208).

There are some success stories and examples of schools in which disadvantaged students are performing to their full potential. Excellence and equity are by no means mutually exclusive – they are inextricably intertwined. In the North York Board of Education, for example, schools exhibiting both do exist. Immigrant or poor or minority students, because of the intentionality of programming and the high expectations of the administrators and staff, inter alia, students perform well above system average in the Board's Benchmarks mathematics testing program.

The education of young women continues to require constant vigilance. Although there is some evidence of improvement in areas such a course selection in secondary schools, it is still clear that a large number of young women are still constrained by the sex-role stereotyping that is so endemic to our society. When one considers factors such as the increased participation rates of women in the workforce, the economic necessity in many families to have two wage earners and the fact that many old women continue to live in poverty, to name a few, then it becomes clear that we must prepare young women adequately for the future. In fact, Guttman (1992) concludes that there must be greater efforts by educators and parents to develop programs and services in the secondary schools for the career development of adolescent females. The fact that role models are important for future planning and career decision-making is clearly established in the literature (Glaze,1980). In my experience as a guidance counsellor, teacher and administrator, this point has constantly been reinforced in my interactions with young women and minorities. While preparing this paper, I received a letter from a young woman who was a student when I was a vice-principal approximately nine years ago. This letter speaks for itself in terms of the needs of young women in our schools today:

> *Dear Ms. Glaze:*
>
> *As I was working one day, I happened to see your name on a pamphlet about the Royal Commission on Learning. I knew that I had to write you a letter.*
>
> *Ms. Glaze, I was a student at Senator O'Connor high school while you were vice-principal there. Although you were not there long, I want you to know that you did make an impact.*
>
> *You were a great example to me of what I could accomplish. Like many teenage girls, I had serious problems with my self esteem. Although many encouraged me and told me I was smart, I never quite believed in myself. I had brains, but no confidence.*
>
> *You were the first woman I knew who had reached such a high level of education. You were always dignified and carried yourself as a woman of respect. Whenever you were in the hallways, I felt a little better about myself.*
>
> *This month, I am entering my fourth year at York University. I am working on my Honours B.A. in political science. With any luck, I hope to go on to graduate school.*
>
> *I hope that if there are future Senator O'Connor reunions, you will attend. I am sure that there are many other women who would like to let you know what you meant to them* - Name witheld to protect the identity of the student.

At the level of enlightened self-interest, it must be recognized that we will certainly need all the students in our classrooms today to

support the pensions of our very large cohort of baby boomers. As well, education is a means of social mobility. The Economic Council of Canada states that better-educated people tend to hold jobs that are more secure and more satisfying. The unemployment rates are higher for persons with lower levels of education and the risk of the unemployment they face has been increasing substantially over time. The choice Canadians face, according to the Council, is to develop skills or accept low wages (and possible unemployment). The future economic and social well-being of our young people will depend on how well they can exploit their potential in the labour market.

Respect for diversity is an important aspect of our Canadian society. Can we become a truly prosperous country if we are mired in turmoil caused by inter-racial or inter-cultural conflict? I doubt that very much! We can translate our vision of becoming a truly inclusive society into reality by ensuring that our future citizens respect, are able to communicate with and have empathy for people of different cultures, races and socio-economic status, and for people with disabilities. Of course, economic prosperity and the ability of individuals to be gainfully employed can also minimize intergroup hostility.

Poverty certainly does exist in our society. An increasing number of families and children now live in poverty. The increasing gap between the rich and the poor poses a threat to the relative peace and harmony which we enjoy. Globally, this gap is also widening between rich and poor countries. As well, we do know that poverty, and its ramifications, do affect the educational performance of students. As educators, we help to eradicate the scourge of poverty by ensuring that disadvantaged students achieve success in school.

The roles which individuals will play in their lives are many and varied. They may play the role of student, worker, consumer, citizen, or parent, to name a few. The fulfilment of these life roles and their life chances are dependent on education generally and career education specifically. Career education can help to shape their prospects of leading a productive, self-sustaining and satisfying life. It can rekindle their spirit and sense of hope in the future. It motivates some students to dream and visualize their role and a place in society. Through increased self awareness, they can also recognize that they have the potential to develop the skills necessary to realize that dream. It is my firm belief that the life roles and life chances of students can be enchanced significantly through career education. Ultimately, everyone benefits – the individuals and society at large. Career education must therefore become an equity imperative!

References

Drucker, P. F. (1993) *Post*-Capitalist Society New York: Harper Business.

Economic Council of Canada (1992) A Lot to Learn: *Education and Training in* Canada. Ottawa: Ministry of Supplies and Services Canada.

Evans, J. H., Buck, H. D. The effects of career education interventions of academic achievement: A meta-analysis, *Journal of Counselling and Development 71*, September/October.

Glaze, A. E. (1980) *Factors Which Influence Career Choice and Future Orientations of Females: Implications for Career Education*. Toronto: The Ontario Institute for Studies in Education.

Gorman, B. G., Johnson, W. H. (1991) Successful Schooling for Everybody. Indiana: National Education Service.

Government of Canada (1991) Learning Well . . . Living Well: Issues and Directions (Consultation Paper), Ottawa: Ministry of Supply and Services, Canada.

Guttman, M. A. (1991) Issues in the career development of adolescent females: Implications for educational and guidance practices, *Guidance and* Counselling, *6*, (3).

Herr, E. L., Cramer, S. H. (1988) *Career Guidance and Counselling Through the Lifespan: Systematic Approaches*. Boston: Scott, Foresman and Company.

Hoyt, Kenneth B. (1978) *Refining the Concept of Collaboration in Career Education* (Monographs on Career Education). Washington, D.C.: U.S. Offfice of Education.

Ontario Ministry of Education, (1984) Guidance Guideline. Toronto: Queen's Printer.

Spady, W. G., Marshall, K. J. (1991) Transformational outcomes-based education and curriculum restructuring: A profound paradigm shift in traditional practice. *Educational Leadership*, October.

Wirth, A. G. (1992) Education and Work for the Year 2000: Choices We Face. San Francisco: Jossey-Bass Publishers.

Women in Non-traditional Occupations: Educational Strategies that Work[1]

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Introduction

The purpose of this paper is to examine obstacles which prevent women from entering trades as a occupation, and to discuss educational strategies for encouraging and assisting women to enter these male-dominated fields. Although a substantial body of research and commentary on women entering non-traditional occupations exists, the focus of this paper is to provide a different perspective on the way in which we think about strategies.

Traditionally, educators and others involved in job training endeavor to assist women to enter non-traditional occupations by utilizing a variety of approaches, including remedial programs; most of these approaches, however, serve only to compensate for the constraints on women's choice of occupations. For example, one of the difficulties facing women who enter trades is the lack of basic experience in handling tools; this stands in contrast to most men for whom hammering, sawing, and drilling are an integral part of their upbringing. Remedial programs have been established to give women the opportunity to develop some familiarity with common tools prior to entering apprenticeship programs in order to offset this difference in socialization and experience.

A second problem which has been addressed remedially is sexual harassment – another commonplace and serious problem for women in trades. It compromises psychological well-being, and becomes life-threatening when it escalates to the sabotage of tools and the work-area (Martin, 1988). A substantial amount of commentary is devoted to helping women develop strategies for dealing effectively with harassment on the job.

While these and other strategies are necessary to ensure that the present generation of female high school graduates has the option, as well as the prerequisites, to enter training programs and work in the trades, their impact is limited because these approaches are compensatory and not corrective. The generation of girls who are presently entering grade 1 will also need remediation unless long-term goals are modified and proactive strategies are put into place.

The challenge is to develop strategies which will ensure that young women will not need to "catch up" in order to embark on a non-traditional career path, or even better, to insure that, by the time they think about being plumbers or bricklayers, these jobs are no longer non-traditional. To this end, I would like to go beyond a discussion of specific programs which can be instituted to assist women entering trades, and encourage the reader to conceptualize the barriers to entry as being different facets of a single issue: gender socialization. I want to do this because the issue of entry into non-traditional occupations exists in a gendered social context which cannot be ignored. After all, if the social context were not gendered there would be no such thing as non–traditional work.

In taking this approach, it is important to understand the double bind that women are in. On the one hand, they are often excluded from trades because they are perceived to be different and inferior to men. On the other hand, in training programs and on the worksite, women, to their detriment, are treated exactly like men, in spite of obvious differences, such as size. For example, women are expected to use tools designed for a

man's larger hand, workbenches, work clothes, and safety equipment designed for taller, larger people (Meurer, 1988). There are less obvious differences as well. As I will discuss in the final section of this paper, women are more than "miniature men" (Meurer, 1988, p. 90). Women and men are significantly different, psychologically, an established fact that educators, job trainers, and others often fail to recognize or take into account.

Ultimately, it is gender socialization that keeps women out of male-dominated occupations. If we can change gender socialization we will also be removing the obstacles that keep women out of trades and other male-dominated work.

Issues and Concerns for Women in Trades

Origins of the Present Work. In the mid-1980s, a friend of mine became the first woman to enter and complete an apprenticeship program as a line worker with the Michigan Board of Water and Light. Aside from having the usual questions such as, "What do you learn to do?" and "What is it like working in an all-male environment?" I was also curious about what gave a 30-year-old woman with a bachelor's degree in physical education the notion to become a line worker. Her answer was complex and absorbing, and, I being a psychologist with an interest in gender issues, my interest was piqued.

As a result, in 1989-90, I developed a pilot project to explore the factors which encourage women to enter non-traditional occupations. Approximately 15 women who were currently working in a trade were interviewed. A large portion of each interview was devoted to investigating how these women got the idea that entering a trade was a possibility for them, and identifying the steps that led to their entrance. In 1992 I was asked to collaborate on a book entitled, *Women in Science, Trades and Technology: Strategies that Work* (Staton, Scane, & Schneider, in press). The purpose of this book is to provide useful, accessible information at a grassroots level for women who might want to pursue a non-traditional career and for people who might be in the position to counsel women regarding career choices. The object of the book is to go beyond problems by focusing on strategies that work, as the title underscores. An extensive literature review, and a second series of interviews were conducted for the purposes of the book. The interview material from both projects forms the foundation for this paper.

Defining "Non-traditional". For the purposes of this paper, a "non–traditional" occupation means a gender-atypical career choice. Although the term is useful, in that it readily invokes the image of a male nurse or a female mechanic, it is not the descriptor of choice for many women who work in male-dominated occupations. The first and, perhaps, most obvious problem is that the gendered nature of work is not static. For example, professions which were previously non-traditional for women, such as law or medicine, can no longer be defined that way. Other occupations, such as printing, were female-dominated before the 20th century (Martin, 1988), while teaching, presently female–dominated, was a profession for men, not too long ago. The demarcation of traditional and non-traditional is constantly in flux, especially because the goal for many women is to make non-traditional work, traditional. As Kate Braid (1988, p. 6) has said, "If we are going to claim this work as our own, it cannot continue to be 'non' anything". Perhaps a more apt and optimistic term might be "temporarily male-dominated".

How dominated are male-dominated professions? By definition, these include occupations in which women's representation is less than 33%. This includes about 80% of all occupations in North America (Braid, 1988). All trades are in this category. In Ontario, for example, male electrical apprentices outnumber females by 73:1, while women are outnumbered in carpentry by 30:1 (Talacko, in press). In the construction workforce in Canada women comprise about three percent (Braid, 1988).

How Women Enter Trades. Women who enter trades bring a variety of strengths to their work both because they are women and because they have had the vision, the strength, and the perseverance to break with tradition. The very act of deciding to do something non-traditional demands thought. Consequently, it is not surprising that the women who were interviewed entered trades as a result of a deliberate choice

about the kind of work that felt right for them, not by default as many males do. For many of them, their trade is a second career. Biochemists became carpenters; real estate agents became plumbers; couriers became construction workers; social workers became cabinet–makers; secretaries became tilers. Some women completed university before deciding to enter apprenticeship programs. A few women are working in their second career within trades. For example, one construction worker is presently completing an apprenticeship in cabinet-making. But whether a career in trades was a first, second or third career, these women were making choices which were based on a clear assessment of their needs, abilities, and interests, ones which required strong motivation.

> *I felt like, ok, I can push a pencil, but what else can I do with these hands. I wanted to be able to have more control...more options. I saw [carpentry] as being useful.... I could always use it – build a house.* (Jane, contractor)

This high level of motivation among these women was evident in the way that they spoke about their reasons for entering trades, and as they described their sense of doing something useful, of feeling in control of their work, and of the satisfaction at seeing a product at the end of the day.

> *You create something. You build from raw material and walk away from a finished project. Usually in a short period of time or space.... It gives me a great deal of satisfaction to know that it's going to stand up, withstand whatever it has to go through.* (Deb, construction worker)

> *Being self-employed is hell sometimes...but it's having a lot of control...having no boss breathe down my neck and having the freedom to travel when I want to...and the variety it involves, because I meet clients and basically have to sell them on me and how I'm going to do the project and then I have to decide how it's going to be done, cost it and do the bookkeeping in the end. So it's a lot of variety.* (Jane, contractor)

Frequently, chance played an important role in the decision to enter a trade. Women who would never have thought that they could do skilled manual work had doors open for them serendipitiously.

> *I was working in social services but I never saw the fruits of my labour. It was a never-ending job and I wanted something else. A friend of mine who is an architect would point out various aspects of buildings to me as we walked around the city. He made me aware of the visual aspects of buildings. I had another friend who was a carpenter, but I thought the work was too heavy. But I started to put things together when I walked into Manpower and saw that a carpentry course was available.* (Marg, cabinet-maker)

> *A friend of mine was finishing her basement and I said I would help her frame it, even though I had never done that kind of work before. I picked up a hammer and found that I really liked it, and that I was good at it.* (May, carpenter/cabinet-maker)

> *I was [in a fine arts course at] university. The equipment was atrocious. And a friend of mine had taken cabinet-making at a vocational school. So I took a vocational cabinet-making course and got credit as a sculpture course and built a bunch of sculptures that looked like cabinets....That summer down there I made a couple of bathroom vanities for my professor...then took a job as an apprentice cabinet–maker.... So I kind of fell into it.* (Seeta, furniture–maker)

A further example is offered in one of the chapters in a book called *Hard-Hatted Women: Stories of Struggle and Success in the Trades,*

> *One of my Sunday morning rituals used to be making some coffee and pouring over the classified section of the newspaper.... I was fed up. I was angry. Fed up with working for starvation wages at a bank..[I] began perusing the ads. And there it was..."Sheet Metal Workers Local 84*

Apprenticeship Committee is now taking applications for its annual test. Women and minorities welcome." Something clicked in my head - I knew that was my [illegible]b. So what if I had no idea what sheet [illegible]al workers did? (Szillagyi, 1988, p. [illegible])

None of the women interviewed had the opportunity to take shop at school, but some had learned manual skills from their fathers who were, themselves, handy and willing to teach their daughters. For example, two women who left successful jobs with large corporations opened a prospering business building and refinishing furniture. In both instances they had learned much of what they knew from their fathers. Frequently, it was mothers who served as role models.

> *My father was useless. My mother was good with her hands. She did the shovelling, the painting, the wallpapering. So I did have that image of the woman who did all the work. And she got it from her mother who was married to a sailor who was never around.* (Seeta, cabinet-maker)

Thus, although there were clear influences in the lives of these women which led them to trades, any impetus from school, guidance counsellors, or other adults in a professional position to influence career choices, was conspicuously absent.

The Challenges of a Male Environment. Although a predominantly male environment posed many problems for women in trades, women discovered that their sex, in and of itself, was not a disadvantage. Although size, for example, has often been used as an excuse for keeping women out of trades, being smaller and sometimes not as strong than men ironically turns out to be an asset. While they admit being exhausted at the end of a work day, they also point out that they have learned to use their brains, as well as their muscle, to get the job done.

> *Yes, men are stronger and taller, but I'm smaller and have more dexterity in my fingers, so I think it's an equal tradeoff. If you want brawn to hold up a ceiling beam, yes, the boys are better at it...but that actually works against them. They tend to use their brawn. That's their solution to everything. They don't think, because they're so used to throwing their weight at it. They don't do it the smart way because they haven't bothered to think about it.* (Jane, contractor)

Indeed, what many women discover during training and on the job is that the gender-specific skills they learned as women have value in their trades. Women tend, more than men, to be careful and neat, and that translates into safety consciousness on the job. Although they might lack experience with tools, many women learn to work well with their hands when they knit, sew and make crafts. Following a recipe is the same whether you are baking a cake or mixing cement, and, as one cabinet-maker observed, the women in her apprenticeship course tended to be better than the men at mixing colors of paints and stains. Many of the women who were interviewed reported that they tend to listen and communicate better than their male counterparts, something which is essential on a job when miscommunication can cost time, money or lives.

Facing the Obstacles. In spite of the talent and potential of females, there is a series of hurdles in the lives of girls and women which obstruct their entrance into non-traditional work, and their continued work in their chosen occupation. Many of these hurdles are variations of gender discrimination. Girls are not directed toward those learning experiences which might lead them to consider non-traditional work and would prepare them for work in male-dominated professions. In fact, they are commonly discouraged from choosing non-traditional jobs. Women who do overcome the obstacles which leave them ill-prepared for entering trades are not always welcomed in apprenticeship programs or on job sites. However, in a society in which equity issues are on the agenda of educators, employers, and government, gender discrimination in the trades ought not be difficult to identify. While solutions to these obstacles may be complex, they ought to be fairly straightforward to implement providing there is a will to do so. Some examples will be provided below.

In the following pages I will also distin-

guish the problems that women have due to gender discrimination, from the problems that they have because of the psychological differences between men and women. These become salient when women work in a male-dominated environment and are not dissimilar to cross-cultural differences, posing problems for the women as well as for the men they work with. These psychological differences are part of the context in which discrimination exists and persists and have important implication for job training.

Gender Socialization and Barriers for Women. Sex-role socialization is the foundation of many of the hurdles encountered by women entering non-traditional occupations. While women believe they cannot do the job, males believe that not only can women not do the job, but also that they should not do the job, even if capable of it. The strategies that are presently employed to overcome these barriers are aimed primarily at changing attitudes of both females and males. Below are five examples which are typical of the many barriers facing women in trades, and strategies which are being employed.

Lack of Familiarity. The possibility of entering a trade simply does not occur to most young women, and if it does cross their mind, it does not seem like a realistic option. They see few if any female role models, they have little information about the nature of the various jobs in trades, the requirements to enter, the vocabulary and the working conditions (Bohnen & Klie, in press). Further, as mentioned earlier, they have little, if any, hands-on experience with tools.

Highly successful bridging programs have been established through community colleges, and private and public institutions that are designed to fill in the gap in knowledge and experience. Through these programs, women are introduced to both the information and skills that they need in order to begin training for work in a trade (Bohnen & Klie, in press; Ross, 1988). However, in the long run, what is also needed is a school curriculum and approach to career counselling which conveys the idea that trades are for women, too. This means developing resource material in which women are depicted as working in non-traditional occupations, providing opportunities for girls to take shop, and routinely providing information about non-traditional work as part of the guidance process.

Math and Science Phobia. The mythology surrounding females' abilities at maths and sciences is a major barrier for young women, fraught with contradictions. At the same time they believe, occasionally erroneously, that these subjects are necessary in order to enter many male-dominated occupations, their motivation to tackle these subjects is diminished because the direct connection between these subjects and the tasks involved in many careers is rarely addressed in course material. (As a friend once pointed out, geometry would have been much more meaningful if she had known that it could be applied to renovating a house.) In any event, young women may be led to believe that they are not good at these subjects, often drop them early on in high school, and then feel ill-equipped to enter a trade. In so far as some occupations do require maths and science, these young women are consequently prevented from entering these fields.

A number of innovative and successful programs have been developed, including specialized conferences and workshops, to familiarize girls with maths, science, and technology, and to introduce these topics in a non-threatening way. What is also needed is the development of curricula which address the ways in which girls, as well as boys, learn. This will be discussed further below.

Training Opportunities. Employment and guidance counsellors are commonly remiss in not steering females toward training and apprenticeship programs in the trades. They often insist that women are not interested, although this is clearly not the case (Braundy, in press).

> *I had counsellors at manpower who were men.... I've never had so much time spent on me in my life.... Explaining to me how the Mafia was involved in construction, how men urinated on the site, how men swore, how my life would be in danger. How there would be no place for me to pee. All this garbage that had nothing to do with it but it was a scare tactic.* (Karen, construction worker)

The educators and counsellors of the fu-

ture, the ones who are in grade 1 right now, need to be exposed to a world in which there is no such thing as a non-traditional job. Just as girls need to see female role models in the trades, so do boys, so that these boys do not grow up into men who exclude women from certain occupations.

Employment after Training. Many employers are reluctant to hire women. When faced with a female applicant, employers claim that the job is filled, that the washroom facilities cannot accommodate females, or they simply state that trades are no place for women. They also resist in more passive ways.

> *This man [at the employment centre] could not deal with me. He would be forced to because I sat there long enough.... I wonder, too, if the potential jobs they sent me out on were places where they knew there was no way on earth I would get hired, either because I was inadequately trained for that particular job...or places where they'd ask if I was applying for my brother or my boyfriend.* (Jane, contractor).

> *A friend of mine [wouldn't believe that men get hired more easily than women]. So we got the ads out of the paper and he phoned in one job. It was for a plumber's helper, and he asked if it was still open. They said, 'yes, come over.' Two minutes later I phoned. 'Oh, the job is taken.* (Helen, plumber)

A variety of community outreach programs have been employed to individually persuade potential employers to hire women. Once an employer has had experience with female employees he is usually open to hiring more females in the future. By the same token, if the employers of tomorrow were raised and educated in a context in which tradeswomen were commonplace, the sex of their future employees would no longer be an issue, and they, themselves, might also be female.

Lack of Social Support

> *You can't expect a single mom to rush off and retrain when there's no daycare.* (Barb, welder)

Finances are a perennial concern for trainees and apprentices, both male and female. However, women who are the primary caretakers of children, have a doubly difficult problem, both in making ends meet during the training period, and especially maintaining their family responsibilities. Employers in workplaces are not used to the flexibility which is sometimes needed by parents who are primary caretakers or who have household responsibilities.

> *One thing that all women find difficult – well men too, but they get their wives to do it - is the management of things related to paperwork in business hours, or anything during business hours - making a doctor's appointment.... In the construction environment you probably have no phone. There's no earthly way you can check the mistake on your VISA account from Monday to Friday. ...It's the guy's wives who...sort out the muddle over the [household] bills.* (Meg, iron worker.)

To the extent that women, in general, bear the brunt of child-care responsibilities, the failure to make allowances for parental responsibilities is discriminatory. Yet, many employers and even some women in trades argue that it is not cost-effective to modify the work environment for those who have primary caretaking and household responsibilities. However, the increasing number of fathers who are taking on caretaking responsibilities may require that workplaces adapt in any event. If the workplace could accommodate women with such responsibilities, it would make it a better place for everyone. It does require, however, going beyond the image of the work site as a male-only domain.

Summary. Although it may initially seem simplistic to say it, the above problems, and others like them, can be reduced to an issue of gender socialization. Essentially, the existing approaches to these problems are aimed at attitudinal change, getting females to understand that they have a place in trades, and getting men to stop resisting, and start welcoming women into their workplaces. But these problems are a microcosm of a social context which also needs changing. If, instead of backtracking, we could begin in primary school to raise children who do

not look at the world through a gendered filter, such strategies would become unnecessary. This is not to say that they are unnecessary now. Indeed, such strategies are part of an educational process for today's employers and employees. It is to say that, in the long run, although looking perhaps 20 years down the road seems like an interminable time, a change in gender socialization is the most efficient and effective way of assuring that no occupation is non-traditional, for either men or women.

Although the changes suggested here are, in some ways, complex, and require fundamental changes in school curriculum and resource materials, not to mention in our culture, they are also, in some ways very straightforward. We need to identify the gender inequities in the process of education and change them. For contemporary educators this is a valid endeavour and is no longer a novel idea. What is new is the explicit thesis that widespread social change is a necessary concomitant of social change within educational systems and within the workforce.

Equal opportunity, however, is not the only issue which needs to be addressed. Gender differences in psychological development is another, more subtle aspect of gender socialization which poses a number of difficulties for women. These differences result in a kind of culture shock when women enter a previously all-male environment. An understanding of the major theory of female psychological development is important in order to understand the impact of these differences on women in male-dominated environments.

The Psychology of Girls and Women

Self-in-Relation Theory. In most theories of psychological development the male pattern is thought to be the norm. When females develop in a way that is different from the male norm, they are judged to be substandard. The most well-known example of this is Kohlberg's scale of moral development, which was developed by testing males only. Females scored consistently lower than males on the scale which was interpreted to mean that females were not as highly developed morally as are males. It took the work of Carol Gilligan (1982) to demonstrate that females use different, but equally valid and evolved, criteria for making moral judgements. Gilligan's work was a milestone in our understanding of the uniquely female experiences of the world.

Central to Self-and-Relation Theory (Jordan, Kaplan, Miller, Stiver & Surry, 1991), is the idea that a woman's sense of self is "organized around being able to make and then to maintain affiliation and relationships" (Miller, 1976, cited in Surry, 1991). Because a women's sense of self exists in the context of relationships, the basic goal of psychological development is, "the deepening capacity for relationship and relational competence." (Surry, 1991, p. 53). This conceptualization of women's growth contrasts with other theories in which psychological development is equated with increasing independence. It also varies from other theories in that the development of females is implicity depicted as the norm, from which male development deviates due to gender socialization.

According to self-in-relation theory, infants are not isolated beings, acted upon by their caretaker. Rather, they are part of an interactive relationship with their caretaker in which both recognize and respond to the emotions of the other. It is with this interaction that the self–in-relation begins to develop and would continue to do so for both sexes if it were not for the differential socialization of boys and girls. Based on our culture's beliefs about masculinity and femininity, girls are encouraged to develop their relationship abilities while boys are systematically discouraged from doing so. Consequently, girls and women acquire a sense of themselves in relation to others, developing a heightened ability to learn about the feelings of others, and to empathize. Being part of relationships, as well as having the ability to maintain them, forms one basis for a sense of well-being, self-worth, and empowerment.

Maintaining clear self/other boundaries in the context of relationships is a far more complex tasks than simply maintaining isolated independence as boys and men are required to do. It requires a high level of psychological development, both cognitively and emotionally. From this perspective, women's development can be seen as a process with positive attributes, in contrast to the negativity with which women's relational needs and abilities have typically been

cast as dependency and inability to individuate.

For women working in a predominantly male environment, the consequences of male/female psychological differences can be confusing, perplexing, and may ultimately result in discouragement. As Surry (1991) writes,

> *... it is important to maintain the vision that although the sex differences we are describing may at times be quite subtle, and individually and culturally relative, they may represent a difference that results in enormous consequences in areas of critical human interaction.* (p. 59)

Significance of Self–in–Relation Theory

When women, who grow up to be attuned to relationships and context, are put in an environment with men who have been taught to be independent, the result may be that "women may experience themselves as outsiders, or 'immigrants', struggling to function in a system which is alien to their reality." (Melamed & Devine, 1986, p. 1). This becomes apparent in two major ways: communication and learning styles.

Communication. Differences in communication styles of men and women have been noted and documented since at least the late 1960s. Male interaction tends to be in the form of a debate, while female interaction involves active listening and development of ideas (Surry, 1991). Men may be perceived by women as being uncommunicative, although men, themselves may fully understand what each other is saying. Kate Braid (1988a, pp. 61–62) gives some examples:

> *When I first went on the job, I thought I was in another culture because I didn't understand a word the guys were saying. They talked in short non–sentences.... For example, some guy would say, 'Last night, eh?' They would all burst out laughing and I wouldn't know what was happening.... They talked in a joking way all the time. It wasn't a discussion, it was just repartee and wit...their language was more aggressive...everything was, 'Move 'er," or Hit 'er.' So there was a sort of violence and a pushiness to the language.... None of the guys I've ever worked with could explain anything to me satisfactorily. You know they could do the work...and they would stick their hands in it and they couldn't explain anything.*

One of the consequences is that the men think the women are incompetent because they don't understand, and the women feel the same.

Learning Styles. The ability of women to see themselves in the context of relationships seems to generalize to the way that women learn best. Women tend to learn best when they have an overall picture of the task and a context for the information. They need to begin with an understanding of the end result and then relate each step of the task to the goal. In order for the information to "click" women need to know why they're learning a skill and how abstract knowledge such as math relates to a concrete task (Booth & Brooks, 1986).

One consequence is that women ask a lot of questions - in particular, they are likely to ask, "Why?" (Booth & Brooks, 1986). Men are likely to interpret this as incompetence (they can't be any good if they need to ask so many questions) or as a challenge to their authority. When their questions are met with indifference or hostility, women are likely to feel that they are, indeed, incompetent and at fault.

Summary. In so far as communication and learning styles of men and women are systematically different, women are at a disadvantage when learning a trade or a new skill in a predominantly male environment for two reasons. First, the information is not presented in a way that is most understandable or meaningful to them. Second, in the "cultural" clash that ensues, women are likely to blame themselves. Although there has been substantial research on differences in learning styles and on women's experiences of learning (Belenky, Clinchy, Goldberger & Tarule, 1986), and, while we live in a culture which ascribes to "vive la difference" in male/female interactions, when the differences are played out on a worksite on in a training program, women, to their detriment, are held personally responsible.

Conclusion

What if we lived in a world in which all children, as part of their basic education, learned the skills needed to work with their hands and use tools, thereby growing up to be more skilled as well as self–sufficient? What if we gave serious thought to raising boys who do not feel threatened by competent women, who have a sense of themselves as related to others? What if we had an educational system which served the range of learning styles in all children? The point is that there are fundamental cultural changes based on an understanding of gender differences that are necessary to ensure that women can enter non-traditional occupations. These cultural changes will benefit everyone. We only need the vision and the will to see them through.

References

Belenky, M., Clinchy, B., Goldberger, N., & Tarule, J. (1986) *Women's Ways of Knowing*. New York: Basic.

Bohnen, E. & Klie, J. (in press) The Bridges Program – Employment equity within an organization. In Staton, P. *et al.* (Eds.) *Women in Science, Trades and Technology: Strategies that Work*. Toronto: Green Dragon Press.

Booth, S. & Brooks, C. (1986) Relational learning styles. In Surviving and *Thriving: Women in Trades and Technology and Employment Equity*. Proceedings of a conference held October 1–4 at Naramata, B.C.

Braid, K. (1988) Introduction to *Surviving and Thriving: Women in Trades and Technology and Employment Equity*. Proceedings of a conference held October 1–4 at Naramata, B.C.

Braid, K. (1988a) Neither friendly nor familiar: Language styles, stress and macho. In *Surviving and Thriving: Women in Trades and Technology and Employment Equity*. Proceedings of a conference held October 1–4 at Naramata, B.C.

Braundy, M. (in press) What needs to change? In Staton, P. et al. (Eds.) *Women in Science, Trades and Technology: Strategies that Work*. Toronto: Green Dragon Press.

Gilligan, C. (1982) *In a different voice*. Cambridge, Mass.: Harvard University Press.

Jordan, J., Kaplan, A., Miller, J., Stiver, I., & Surry, J. (1991) *Women's growth in Connection*. New York: Guilford.

Martin, M. (1988) *Hard–Hatted Women: Stories of Struggle and Success in the Trades*. Seattle: Seal Press.

Melamed, L. & Devine, I. (1986, November) Women and learning style: An exploratory study. Paper presented at the Canadian Research Institute for the Advancement of Women Conference, Moncton.

Meurer, S. (1988) Health and safety. In *Surviving and Thriving: Women in Trades and Technology and Employment Equity*. Proceedings of a conference held October 1-4 at Naramata, B.C.

Ross, E. (1988) Bridging programs for industry: Moving clerical women into entry–level trades and technical jobs. In *Surviving and Thriving: Women in Trades and Technology and Employment Equity*. Proceedings of a conference held October 1-4 at Naramata, B.C.

Staton, P., Scane, J., & Schneider, M. (in press) *Women in Science, Trades and Technology: Strategies that Work*. Toronto: Green Dragon Press.

Surry, J. (1991) The self-in-relation: A theory of women's development. In Jordan, et al. (Eds.) *Women's Growth in Connection*. New York: Guilford.

Szillgyi, B. (1988) Sheet metal worker. In *Hard-Hatted Women: Stories of Struggle and Success in the Trades*. Seattle: Seal Press.

Talacko, P. (in press) Act Now! In Staton, P. *et al.* (Eds.) *Women in Science, Trades and Technology: Strategies that Work*. Toronto: Green Dragon Press.

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Part-time Work: The Underground Passage

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Introduction

In a society where virtually 100% of the population receives a full-time public education until age 16, the transition to full-time employment can be an uncertain passage. Unless a student has been prepared and supported to move gracefully between the hierarchies of education and employment, the student may flounder. To avoid such discomfort, it appears that many young people are using part-time employment as a route to adulthood and discovering that the road often promises freedom, but the responsibilities leading to a rewarding lifestyle are frequently absent.

New patterns of human behaviour often arise during times of stress; today, we speak of the "underground economy", a system of barter and cash payments used to avoid high taxes. During World War II the "underground" was a network of citizens who organized in clandestine cells to harass occupying military forces, and during the United States' Civil War the "undergound railway" helped thousands of slaves escape to freedom in Canada. Today, the interval between full-time school and work has become a stressful period for youth and a new underground has emerged, one not usually recognized because it is not a formal link, but an underground passage. While employed in jobs on the margin of the formal economy "employed students" learn about work in the hope of finding a route to economic freedom.

Since the 1970s, increasing numbers of Canadian youth aged 15 to 24 have been involved in combinations of education and work, suggesting a long-term trend propelled perhaps by periodic cycles of high unemployment. Whether as secondary or postsecondary students, many youth have unwittingly used part-time work as a way to link the worlds of education and employment, a link about which opinions diverge because of both positive and negative consequences.

Students who work too many hours at part-time employment during the academic year may become underemployed after they leave school partly because they do not always integrate educational and employment opportunities well. In addition, part-time work often limits future options because it fosters consumer debts, contributes to lowered grades, a superficial understanding of the academic curriculum, and a narrowed vision of career possibilities.

Part-time work could be more than an experience that detracts from long-term goals. It could be an opportunity to integrate knowledge from the "ideal" world of education and experiences from the "real" world of employment to create a balanced life, an application of the concept of lifelong learning. Although the extent to which students work part-time is largely beyond educators' control, as "meta-curricular advisors" teachers and administrators could utilize discussions about part-time work as a component of their roles when assisting students in transition to maximize their education and future prospects. Too frequently, informed discussions about part-time work are simply not on the agenda.

In this paper, quantitative and qualitative research literature, mostly Canadian, about the incidence of employed students is utilized to construct a profile of what happens during the transition from school, and the role of part-time work as a link in the process is considered. Then, the effect of part-time work upon education, experience, and employment is discussed and possible

strategies that educators could use to minimize negative effects are identified. This profile is not complete; there are many gaps in our understanding of the process.

Prevalence of Part-time Work

Part-time work, as defined here, is the employment that a full-time student accepts during the regular school term; it does not include periodic full-time employment during school breaks, nor does it include summer employment. Although there are substantial differences between secondary students and university students, especially with regard to the direct cost of education, part-time work seems to be a large component of the 1990s student lifestyle, and many students who commute to university continue with part-time jobs they accepted when in high school. In addition, "youth", a designation for young people aged 15 to 24 years old, is the international classification used to calculate employment statistics and other demographics. Thus, reference is made here to both secondary and postsecondary students, in recognition of the continuity in students' lives while acknowledging the distinctiveness of the educational jurisdictions.

For many Canadians, working part-time on Friday evenings or Saturdays has been a part of growing up. The experience provided pocket money, a glimpse into the adult world, and some useful references and skills. It rarely interfered with extra-curricular activities such as sports, drama, or band, and certainly not with field trips. However, the role that part-time work plays in full-time students' lives has apparently changed. The growing influence of part-time work as a link between education and employment has been masked by the high unemployment rates during the periodic recessions of the 1970s, 1980s, and 1990s and by profound changes in the marketplace. Subsequent implications for the individual youth as well as for society are serious; the impact upon the education systems has scarcely been assessed.

If a student attends school for 30 hours per week and does the expected amount of homework, approximately 15 hours, that total of 45 hours is equivalent to a regular week of work for an adult, excluding travel time. Canadian children aged 12 to 17 also watch television for an average of 17.7 hours per week according to Statistics Canada (Donaldson, September, 1992). In addition to school, homework, and television, more students are working part-time during the school year, and they are frequently scheduled to work during the week if they live in urban areas (Donaldson, 1992; Sunter, 1992). The percentage of employed students between the ages of 15 and 24 increased 10% between 1980 and 1989 to 41%, with the greatest increase being young women between the ages of 20 to 24 (Sunter, 1992).

In 1990, nearly half of the employed students between the ages of 15 and 24 worked between 10 and 19 hours per week; just under one-quarter worked 20 hours or more and about a third worked fewer than 10 hours per week. As the age increased so did the hours; for example, 15% of 15-year-olds worked 20 or more hours, but the percentage increased to 24% for 17- to 19-year-olds and to 28% for 20- to 24-year-olds. Although students are legally required to be in school until age 16 in all provinces (but not the Northwest Territories), as Canadian citizens they have the right to work after age 14, excepting in factories and logging camps. In Toronto, some employers have developed training policies for children too young to work in fast-food kitchens, and some students take credit courses at night so they may work during the day (Donaldson, September, 1992).

While the trend is associated with high school students, university students who commute also often work part-time especially during their first year. At the University of Calgary, students retain full-time status with three courses (unlike secondary school where a full load is five). At such commuter campuses, students often continue lifestyle habits begun in high school until dire results from their first-semester mid-term assignments jar them into re-assessing their workload; approximately one-quarter of all working students drop a course rather than discontinue their part-time employment (Donaldson & Dixon, 1993).

In fact, patterns of part-time work and part-time schooling appear to be an emergent lifestyle for most young people in their twenties (Krahn & Lowe, 1992). There appear to be many reasons. Among younger students, consumer-

ism and a desire to be in a more adult world seem to be dominant reasons (Sunter, 1992; King, Warren, Michalski & Peart, 1988). Re-entry and postsecondary students often cite financial responsibilities, particularly if they are women (Donaldson, 1992). Youth unemployment is habitually nearly double that of the general population, so a fear of unemployment rather than underemployment may also be a consideration. In December, 1992, unemployment rates for Alberta youth 15 to 24 were 16.5% for males and 11.5% for females; during the same period the adult rate was 8.5% and the Canadian rate was 11.5% (Government of Alberta News Release, January, 1993). Whatever the reasons, young people are combining education, experience, and employment, without necessarily integrating them well, and the consequences affect everyone.

The Passage from School

The transition from school may be considered as a three-staged process: school-related, interim period, and job entry employment. Regardless of the level of credential earned, every year thousands of students make very personal decisions that affect their passages from school. As would be expected, students with a high school diploma or university degree do not usually enter the workforce at similar job entry levels; the higher the level of education, the greater the opportunities, and the graduate usually has more resources to negotiate the transition successfully than does a dropout. The interim period is psychological (beginning when students are still in school and ending approximately 18 months after entering full-time employment) and chronological (because of part-time education-employment patterns, boundaries between the stages are not as overt as previously).

Leaving school has been called a rite of passage, part of a larger process of socialization in which the child is acknowledged to be gradually attaining adult status. However, milestones in the passage are valued differently by adult mentors. Teachers and administrators, parents and friends who have nutured a young child from kindergarten to high school student regard the graduation ceremony as the significant ritual in the passage from school. In addition to graduation, some parents encourage their children to develop applied skills in the workplace, and the acquisition of a job, even a part-time one, is considered an adult achievement. At job entry employers review academic credentials, applied skills, and assess personal presentation and attitudes. Graduation ceremonies and diplomas signify the high road in the passage from school to work; part-time work represents the low road.

As the annual student cohort leaves school, patterns of behaviours emerge, some of which educators can influence more than others (Donaldson, 1992). While school leavers are frequently divided into three populations (dropouts, graduates who enter the workplace, and postsecondary transfers), each approximating one-third of the total, the destinations are quite diverse. In a retrospective study of graduates and non-graduates from an Ontario school who did not continue directly to postsecondary education, seven patterns were identifed: passing through the school as a transfer student, serious personal and social *ongoing problems, floundering, bottleneck problems associated with school, apprenticeship, re-entry* at the postsecondary level, and successful establishment in the workforce.

Recently, because of bottleneck entry difficulties in obtaining admission to postsecondary institutions in Calgary, a new pattern has developed: graduate upgrading. Students who have graduated from high school are returning, attempting to raise their final grades so they might be eligible for admission to a postsecondary institution. In 1991, more than one in five students rewrote provincial examinations and one in twelve students took more than four years to complete high school (Alberta Education, 1992). The extent to which part-time work influenced academic attainment among these students has not been studied. Results from the few studies that have attempted to research connections between academic achievement and part-time work suggest that the tradeoff in marks is modest but, as discussed later, the knowledge absorbed and affect on academic program selection may be significant (Green & Jaquess, 1987; King *et al.*, 1988).

Part-time work experiences affects behaviour in all of the transition patterns. During a period of high employment for youth, when finding work was easy, the link between part-

time work when in school and subsequent full-time employment was disturbingly strong. More than 50% of the students who went directly to work from an Ontario school during the 1987-88 year simply remained at the same establishment upon graduation without exploring other options. As one male questionnaire respondent commented: "Right after I left school I was given a full time job by my employer at that time. I kept on working as a cook (which was originaly (sic) my part-time position) before I was promoted as assistant manager" (Donaldson, 1992).

When employment is generally more difficult to obtain, youth apparently juggle school and work over a longer period of time, extending the interim period of the transition process. Results from a longitudinal study of school-work transitions which tracked high school and university graduates in Edmonton between 1985 and 1989 suggest that a minority of participants left school completely; within the four-year period, only 11% of the high school graduates "had left for good" and only 30% of the university graduates did not return at all (Krahn & Lowe, 1992). While educators espouse the ideal of lifelong learning, the impact of a majority of youth continuing to utilize the educational systems after graduating, or postponing graduation because of part-time lifestyle patterns, has not been discussed extensively.

Federal Stay-in-School initiatives have been widely publicized and many good programs for students who are at-risk of graduating have been initiated. These range from various types of work experience programs within schools to subsidized work projects for out-of-school youth. Recently, Alberta Education approved an Integrated Occupational Programme (IOP), becoming the first province to approve a certificate of completion for students who earn 80 credits in a curriculum designed to enhance school-work transitions.

The problems of graduate transitions, however, are not so well addressed. While these youth are satisified with their education, they are less pleased with the way in which schools assist them in making transitions from school (Krahn & Lowe, 1992). Also the recent Canadian Education Assocation opinion poll indicates that the public is more critical of secondary school problems associated with the transition to work than with any other issue except the extent to which drugs and alcohol are abused (Williams & Millinoff, 1990). Mismatched educational credentials and employment opportunities affect the transition of both high school and university graduates. The loss is more than a lowered individual economic rate of return on an education; these are the young people whose potential talents are needed to sustain and renew society.

Thus, whether employment is readily available or it is difficult to find, young people are apparently combining work and schooling at a younger age, working more hours per week, and staying within the educational systems for a longer time period than previously. Although youth unemployment is usually higher for dropouts, underemployment for graduates and mismatches between education and employment opportunities may be also be serious problems. Policies have been developed at all levels of government for at-risk students, but policies addressing the welfare of graduates who are motivated but who often flounder, have been neglected.

Part-time Work as a Link

Linkages in the transition process between education and employment include academic credentials, skills learned in school, references, contacts, and part-time work. The extent to which these links are utilized varies within transition patterns and by educational levels. Educational credentials are undoubtedly the best passport to a good job as many employers would not consider candidates for a position unless graduation dates are listed on a résumé. Although credentials act as screening devices, contacts frequently help obtain an interview. Skills have more direct value if they are specific to an employment field (i.e., activity skills are useful in education and recreation). Youth who move from secondary school to employment are hesistant to ask teachers for references so they obtain them elsewhere (Donaldson, 1992). Thus, the part-time work experience becomes an important link when leaving school to obtain employment. Skills, contacts, and references are the pragmatic results of juggling school and work. However, student testimonials confirm that not all young people juggle well or wisely.

Pre-service education students at the University of Calgary enrol in a communications course for which one assignment is a journal about a memorable school experience. One such reflection includes the following episode:

> *From kindergarten to grade eight, I was a straight A student but upon entering high school 'something' happened. My grades began to slip from a mixture of A's and B's in grade nine, to B's and C's in grade ten until my lowest point in grade eleven. What happened in grade eleven is not only the most memorable, but the most embarrassing and devastating experience I have had thus far in my education. I failed five out of eight subjects. I can vividly remember the phone call I received one and a half weeks after final exams, advising me that I had failed. At my high school, when a student failed a subject a counsellor called to let him or her know. When (my former teacher) would not tell me how many subjects I had failed, my heart started to pound and my stomach felt as though I had just gone over the largest hill on a roller coaster - I hate roller coasters. She asked me to see her that afternoon to discuss my failures.*
>
> *Miss A. must have been able to read my thoughts, because she said she knew I was not a stupid person and was capable of better grades. Whether or not Miss A. knew it, her comment brought about a change for me personally. Had she told me that I should drop to the general level in all of my subjects, my sense of identity would have been quite different. . . . My dad, after yelling at me for a while, actually calmed down so we could talk. When my dad wanted to discuss my failed subjects I was quite surprised. We decided that I would repeat biology and math in summer school and not worry about repeating the other subjects because by the end of grade twelve I would have enough credits to graduate without them. We also agreed that I had been working too many hours at a variety store and this should be cut down after the summer. I promised my parents that the next school year would be better, and it was considerably! I managed to obtain my highest average thus far in high school. I went on to graduate from grade thirteen, then college, and now look at me: I'm in second year university. Failing five subjects made me realize that if I did not start to concentrate in class and study at home, I would not even have marks high enough to get into college. My dad also came to realize that yelling at me was not going to help my grades, and he hired a tutor to help me with grade twelve math. It is not an experience I will share with my grandchildren unless one of them is failing a subject and needs some inspiration. Hopefully, I will be able to tell him or her, 'look at your Grandma, I failed five subjects in grade eleven and went on to graduate from university and become a teacher.'*
> (Donaldson, 1992/3)

By contrast, student volunteer leaders enrolled in another section of the same course, designated to assist with first-year student retention, often defended their experience. One young man who hopes to become a chiropractor wrote:

> *At first glance, part-time work seems to have negative effects. For example, it sacrifices study time, it may produce inconveniences in transportation, and the additional burden can add another stress to the already hectic lifestyle of university students. On the flip side, part-time employment can provide many benefits, including immediate financial income, possible summer employment opportunities, and possible future career opportunities. During the 1991/92 academic year, I had three different part-time jobs as well as a volunteer position at the Foothills Hospital. On top of that I carried course loads of four and five for the fall and winter semesters respectively. (The jobs were Floor Chairperson in Residence, activity supervisor for the intramural programme, and basketball referee for a school division). Part-time work obviously created extra stress in my life, but the numerous benefits of all my part-time work experience last year outweighed the drawbacks easily. It is possible that these experiences could still be benefitting me 10 years from now. I am a strong believer in the impor-*

> *tance of education, but I also feel that a wide range of work experience and contacts is very important. People who enter the work force with only a degree are starting to be overshadowed by those who have a degree was well as other related experience. My part-time experiences last year, this year and for years to come may hinder my academic success slightly, but the rounded education that I will have in five years will provide me with an advantage and give me 'the edge' in the real world.* (Donaldson, 1992/3)

At the secondary school level, at-risk students, marginalized students, and some immature students appear to benefit from working part-time if the hours are not extensive, that is, more than 10-15 hours per week (King *et al.*, 1988). However, few educators are enthusiastic about the trend. Results from an 1988 Ontario study involving six school boards and 2,250 personnel suggest that urban-rural differences influence the extent to which part-time work affects extra-curricular involvement and academic achievement; also, the extent to which school boards regarded the issue as a priority was perceived differently by personnel (Lawton *et al.*, 1988).

In geographically isolated locations, schools played a central role in students' lives and opportunities to work part-time were more limited. Staff at rural schools also emphasized academic credentials, references, and personal contacts as linkages between education and employment. Urban environments were characterized by diversity so that the influence of school-based contacts and references appeared to decline while the estimated percentages of students working part-time increased from 50% in rural locations to between 60 and 80% in suburban areas.

Administrators and teachers also thought that their commitment to assisting students in transition was greatest at the school-level. In their opinion, few school boards have made this a priority except for at-risk students. Department heads, embedded in their discipline within the school, often differed significantly in their opinions from school board officials who had more contact with board personnel or teachers who had more contact with students. Written comments from educators about part-time work ranged from requests to have part-time work legally restricted to concerns about fatigue and incomplete homework assignments. While most thought that programs such as co-operative education were beneficial, many also commented that the goals and objectives of secondary schooling needed to be clarified so that the role of the school with regard to employment was more clearly understood.

Influence of Part-time Work

Retrospective wisdom is invaluable, especially to those trying to understand the transition process, conceptualized as three-staged: an in-school period, an interim period, and a job entry period. These stages may be discussed from the perspective of trying to understand how part-time work affects what the student actually learns. Although literature is scanty the limited evidence points to a scattered profile in which behaviour patterns similar to those discussed earlier could be identified.

That some employed students compromise the quality of their education is obvious. Nevertheless, it is evident also that some students enhance and deepen their learning by working part-time. In an American study of Oklahoma students, differences in accumulated GPAs between employed students and students who didn't work during the academic year were not significant. However, employed students scored significantly lower on the American College Test (ACT), a pre-university requirement. Also, participation rates in extracurricular activities were significantly lower for employed students, especially girls (Green & Jaquess, 1987). Among Ontario students, general-level and advanced-level students average marks increased slightly if students worked between 6 and 10 hours per week and dropped slightly as the hours per week increased. However, the general-level students marks dropped less than 1% while the advanced-level students approximated 2%, enough to make a difference with regard to university entrance (King *et al.*, 1988). As would be expected, participation in extracurricular activities and preparation of homework and examinations also decreased as the number of hours worked per week increased. With increased hours of employment,

absenteeism from school also increases, especially among boys. Students state: "I was too tired to get up in the morning"; "I passed but I could have done better"; I graduated, but "I was a mental dropout" (Donaldson, September, 1992).

On the positive side, students who integrate course work with part-time work or volunteerism appear to accelerate their career paths: some also appear to mature from the discipline imposed by workplace realities, and a few may actually learn basic skills that seemed too abstract in a classroom setting. One young woman in a case study continued with her high school cooperative education placement as a full-time employee while completing a law and security program at the local college. Another youth who dropped out recognized his disadvantage because of the lack of credentials, but supervises 18 people in a middle managment position. And a third, a graduate, acknowledged, "School was more important, but I preferred work and would fall asleep in class." In fact, differences between graduates and non-graduates with regard to the level of completion of academic courses such as math and science was minimal among these Ontario youth, and traditional gender differences appeared with regard to technical and business credits (Donaldson, 1992).

Significant gender differences appear during every stage of the transition process. While in school, boys and girls often select different electives and pre-requistes; when employed part-time, girls may be in white-collar jobs that lead to full-time employment with a limited opportunity for advancement, while boys may work in higher-paying, unskilled labouring jobs but have more opportunities for advancement. There is limited evidence to indicate that more young men work part-time during high school, but at the postsecondary level, more young women work (Donaldson, September, 1992). During the job entry phase, young men and women may compete for employment that leads them into quite different careers. Probably the normal career path for most women is different than that of men, even when qualifications are equal.

Students and teachers frequently refer to the "real" world as something outside of education and the classroom. If so, then is education an "ideal" world? Most experienced educators would wince and disclaim such a label. Nevertheless, teachers spend hours developing learning strategies to make their students more successful. "Failure" is to be avoided; whenever possible, strengths and talents are recognized. Knowing the consequences, some compromise by awarding a C grade when performance is not satisfactory. The world of employment is not so idealistic – even very young employees recognize that absenteeism results in dismissal and not suspension and that a poor performance is not easily forgiven.

Influencing Part-time Work

While some educators might wish to regulate the behaviour of teenagers beyond the powers of existent educational and labor laws, and while government policies encourage students to stay in school, it seems unlikely that legal restrictions, policy guidelines, or alternative programmes will greatly reduce the trend of employed students, although they may serve to limit excesses. Laws do not acknowledge the reality of diverse patterns in departures from school, departures that reflect individual and cultural diversities of interests. As educators, teachers foster this diversity and encourage lifelong learning habits. Government programs offer assistance to the disadvantaged; the more advantaged also often struggle through a difficult transition that usually depreciates their talents and the societal investment in their education. An educative approach to the problem will probably work better to ease the transition than a punitive one.

Effective school-based strategies include monitoring absenteeism, creating linkage programs with the community, establishing networks of referral systems, organizing teacher in-service activities, and integrating discussions about work into the curriculum (Donaldson, September, 1992). These strategies are still too reactive. A better understanding of the patterns of behaviour that emerge as students prepare to leave school would assist in the development of a range of proactive education-employment transitions. Given the complexity of society, it is not appropriate to honour only one exit route from school for all; even 17 year-old graduates, those who most represent academic success most in the

current system, can stumble during the transition period.

Returning to the analogy of the underground passage, perhaps the best route to freedom is still education, but what is meant here is an education about how best to integrate ideals with realities. The time has arrived for educators to consider the integration of educational content with exposure to the workplace as a meta-curricular responsibility. Otherwise, there is danger that much of the idealism will devolve into cynicism as youth experience marketplace realities that differ from the content of educational courses.

The greatest impact that educators have upon young people is while they are students. Once these young people have left the school systems, they have only their credentials and the knowledge or thinking skills acquired in the classroom: they are now youth, not students. Prospects of isolation from the large institutions that house education and employment, isolation from friends, and isolation from making a contribution to society are not pleasant images. Returning to school, although it may be postponing an inevitable adjustment to the employment sector, may seem to be the most attractive option.

During this stressful period, part-time work may be the only continuous link between education and employment, although it may also be an experience that limits horizons by providing false comfort and absorbing energy that could be used to explore preferable options.

The implications of financial linkages between part-time employment and unemployment insurance has never been seriously researched but undoubtedly there is a connection. In the Ontario-based case study mentioned previously, one re-entry adult student lasted less than a semester in a secondary school when Employment and Immigration informed her that she could not attend school and receive unemployment insurance (Donaldson, 1992). Employed students who work in seasonal jobs must receive some unemployment insurance, otherwise there would be no unemployment statistics for this age group. The probability of this influence upon student decisions appears to increase at the postsecondary level (Donaldson & Dixon, 1993), and could provide a leverage to encourage or discourage some patterns of part-time work.

Educational credentials are a passport to better employment and most youth will not obtain entry-level jobs that lead to careers if they do not have high school graduation, a postsecondary certificate, or a degree. Although employed students may be marginalized within the educational systems because of their commitment to part-time work, they probably will not be asked about coursework in an interview situation. Almost certainly, however, they will be asked if they have established a work history. Thus even menial part-time work has an incremental value as students move through the three transition stages. Considered a negative influence within the high school system, part-time employment is a stabilizing influence during the interim period, and could be a valuable addition to a resume during job entry. Although this experience may also contribute to mismatches between education and employment, employer demand for good marks and progress towards a degree could benefit both parties in the long run.

Mismatches in the relationship of education to employment also might be reduced if more students understood the labour force, the marketplace, and the demographics in their areas of interest. Yet, it is sometimes difficult to make students listen. One high school dropout reported that the "auto shop teacher chased after him" to join the high school cooperative education program but he was "too young and insecure" (Donaldson, 1992). At the other end of the achievement scale, a university senior reported:

> *Although I am in my last year of a psychology degree I was extremely uncertain about my future career. It has seemed the transition into the work world was far off in the distant future. As I thought of which career I should choose to shadow I realized how little knowledge and awareness I had of possible career options. My anxiety was replaced by feelings of fear as I realized how unprepared I was for a major transition in my life* (Donaldson, 1992/3).

After leaving the educational systems, such students are likely to flounder unless given support and direction earlier, perhaps backed up

with the hard currency of a graded assignment about a career profile. These young people might, indeed, discover that there are "no jobs out there" in their area of interest and make more informed decisions about alternatives. Frequently, these students discover related career options, often in growth areas of the employment sector, and myths about career opportunities are reduced to appropriate levels of concern.

Conclusion

Although gaps of knowledge about aspects of the consequences of employed students obviously need to be addressed, future research and policy should be developed within the context of the six major points considered in this paper.

The long-term trend of students working during the academic year is more than a consequence of economic cycles. It is a component of an urban lifestyle in which consumerism, technology, and a changing marketplace have created uncertainty about the future. While an attitude of lifelong learning is desirable, fragmented lifestyles do not result in a life lived in balance.

The transition from school to work is a process, both psychological and chronological, that has three components: a school-related stage, an interim phase, and job entry. Links that students use include academic credentials, knowledge and skills learned in school, references, and contacts. The influence of part-time work increases as the student moves through each stage, and this influence has both negative and positive consequences. When individuals are in transition from high school, at least seven cohort patterns of behaviour may be identified. Recognition of such patterns provides a useful guideline for assisting the transition. Also, the role that part-time work plays for students making the transition from secondary school to university needs to be examined further.

Students need to integrate knowledge from the ideal world of education and experiences from the real world of work if they are fully to utilize talent and contribute to a society that needs their energy and ideas. If their passage from school to work were less of an underground route, their increased freedom to make informed decisions would benefit everyone.

Within educational systems, teachers could act as meta-curricular advisors to mentor students through the process. Schools could develop school-based strategies appropriate to their culture. School boards could articulate programs and policies with the community. The educational objectives of a provincial government (dare a national policy be considered?) could foster an integration of education, experience and employment that would establish a positive environment for young people making transitions between the hierarchies of education and employment. Public concerns about the realities of secondary education could thus be addressed without compromising the idealism of educators.

Data about bottlenecks in the passages betwen educational systems and between education and employment are needed. The large numbers of graduates who continue as students may not be a positive outcome, but neither are the apparently large numbers of students who achieve credentials but compromise the quality of their education.

Finally, the passage of students into the workforce is in part a responsibility of society. No group can strengthen the linkages between education and employment alone. A cross-sectional representation of interests – student, parent, teacher and administrator, employer and concerned citizen – will reduce problems associated with the transition process. Culture connotes quality, and our culture must assist its young to make a better match between their ideals and the realities of our times.

References

Alberta Education (1992) *1990-91 School Year Diploma Examinations Program Annual Report*. Edmonton: Author.

Donaldson E. L. & Dixon, E. (1993) The Intentions and Retention of First-Year Chemistry Students. Phase One: Progress Report. Calgary: University of Calgary.

Donaldson, E. L. (1992/3) Student papers: Reflections about past experiences in education and at work. EDTS 341 Interpersonal Communication in the

Classroom Assignment. Calgary: Faculty of Education. Unpublished.

Donaldson, E. L. (1992) Patterns and profiles in the transition from school to work, *Journal of Educational Administration and Foundations, 7*(1), 30-47.

Donaldson, E. L. (September, 1992) Adjusting to the effects of students working part-time, *The Canadian School Executive, 12*(3), 3-7.

Government of Alberta News Release (January 8, 1993) *Alberta's Unemployment Rate Drops.* Edmonton: Author.

Green, G. & Jaquess, S. N. (July/August, 1987) *The Journal of Educational Research, 80*(6), 325-329.

King, A. J. C., Warren, W. C., Michalski C. & Peart, M. J. (1988) *Improving Student Retention in Ontario Secondary Schools.* Toronto: Ministry of Education.

Krahn, H. & Lowe, G. (February, 1992) Transitions from school to work in Edmonton, 1989-89. *Survey Highlights Bulletin* 18:1 University of Alberta: Population Research Laboratory, 4 pages.

Lawton, S. B.; Leithwood, K. A;, Batcher, E.; Donaldson, E. L.; & Stewart, R. (1988) *Student Retention and Transition in Ontario High Schools: Policies, Practices and Prospects.* Ontario: Ministry of Education.

McFarland, J. (February 6, 1993) Jobless rate drops. *Financial Post.* Toronto.

Sunter, D. (October-November, 1992) Students at work. *Newsletter.* Toronto: Canadian Education Association, 5.

The Canadian Encyclopedia (1985) Volume Three. Edmonton: Hurtig Publishers.

Williams, T. R. & Millinoff, H. (1990) *Canada's Schools: Report Card for the 1990s. A CEA Opinion Poll.* Toronto: Canadian Education Association.

The Workplace Challenge: Learning a Living

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I am honoured and pleased to participate in this conference on a subject that is of vital importance to my organization and to individual Canadians. As one of the people on the roster of speakers to represent the industrial community, I am pleased to share with you a business perspective on education in Canada. A strong Canadian educational process is fundamental to equipping Canadians in order to compete effectively in the global marketplace.

Canadians are becoming aware that traditional resource-based competitive advantages are eroding and can no longer ensure our economic success given the new realities of world markets. Canada's competitiveness, as measured in the *World Competitiveness Report* produced annually by the EMF Foundation, a Swiss-based academic consortium, has fallen rapidly in the last four years. In 1989, Canada ranked fourth; in 1990 we moved to fifth place; we maintained that position in 1991; but last year slid into eleventh place when compared to the rest of the 23 members of the Organization for Economic Cooperation and Development (OECD).

Our ability as a country to sustain our standard of living is threatened. We face economic adversity unlike anything in our history. Unless we change the way we do business, we are simply not going to be able to generate the wealth needed to support our current standard of living, let alone improve it. In 1939, Canada and Argentina had the same standard of living? Not many of us would like to return to that status!

Much has been said about entitlements and what governments should be doing for us; too little is said about what we should be doing for ourselves. The challenge of improving competitiveness falls squarely on the shoulders of Canadian businesses and individual Canadians. The private sector must take the lead role in initiating competitiveness and capitalizing on targets of opportunity.

A strong Canadian educational system that provides a world-class learning experience for all participants is paramount if Canada is to succeed in competing effectively now and in the future. It makes the quality of our education among the most important strategic weapons to improve the capability of each Canadian and, therefore, Canada's overall competitiveness. Our capacity to acquire and apply knowledge must become one of the most significant advantages that we, as Canadians, possess. The skills, knowledge, and attitude that we demonstrate will count the most as we compete for business with the rest of the world. This human capability factor will be the key determinant of success or failure. In truth, the only sustainable competitive advantage that Canada has is the capability of every Canadian to acquire and practise cutting-edge skills.

Lifelong learning to the highest standards will reward Canadians with lifelong employability. We shall be learning a living. Employment is the engine that drives our standard of living. To phrase this in a slightly different way, lifelong learning leads to lifelong employment and thus to a world-class lifestyle.

In a global marketplace, the transfer of technology and capital are for the most part borderless and rapid; therefore, the location of plant expansions, new product development, and virtually all innovations will depend on the availability of

skilled employees. Existing businesses will not succeed simply by making heavy capital outlays on new equipment and manufacturing facilities embodying leading-edge technology. That is just not good enough. Instead, business must look to individuals to become fully aware of the relevance of education to their future prosperity and that of the organizations that employ them.

Education has a profound effect on the lives of Canadians in terms of the kind of jobs we can aspire to, our income, and the quality of life we enjoy. Canada faces a threat similar to that of our neighbour to the south: High skills or low wages. In a 1990 report called *America's Choice: High Skills or Low Wages!*, produced by The Commission on the Skills of the American Workforce, it states:

> *We cannot remain a high-wage, low-skill nation. Either America will do whatever is necessary to create high-performance work organizations and the high skills needed to sustain them, or the country will continue to slide toward low skills and low pay that goes with them.*

One of the concerns expressed in a recent magazine article by Beverly Geber (*Training*, January 1993) was that the US might be a nation of shoe clerks, since the service sector would be the location of much of the new jobs created in the US. This could also be said for Canada. In a 1991 study by Professors Rugman and D'Cruz of the University of Toronto commissioned by Kodak Canada Inc., it was stated that 70% of all Canadians were employed in the service sector. One cannot lose sight of the importance of the manufacturing sector as an important provider of high-wage jobs and as a major source of product demand for other sectors. We must, therefore, urgently address declining employment in Canadian manufacturing.

Lester Thurow, the Dean of the Sloan Management School at the Massachusetts Institute of Technology, said:

> *The only way Americans and Canadians can maintain their high wages is to improve the education and skills of the bottom half of the workforce, which now lacks the skills needed to command higher wages. If we don't have skills better than the Mexicans, that's not the Mexicans' fault; it's our fault.*

Skill Requirements

A recent report by MaryAnn McLaughlin for The Conference Board of Canada states that the critical skills, qualities, and competencies indicated by business as being essential are those already reasonably congruent with the current goals of education systems.

The three key skill areas are academic, personal management, and teamwork. Under academic skills are the traditional three R's augmented by speaking, listening, thinking critically, researching ability, and learning for life. Included under personal management skills are attitudes and behaviours (such as self-esteem, confidence, honesty, initiative and energy), responsibility (setting goals and priorities, managing time, and accountability), and adaptability (creativity, respect for diversity and embracing change). Teamwork skills involve being a contributing team member while respecting the thoughts and opinions of others.

Let us look at Kodak Canada. We were established as a Canadian company in 1899. George Eastman, the founder, had a vision of not only selling products in Canada but also of manufacturing products for the Canadian marketplace. This has been our tradition and our heritage. Although the company mission continues to this day, the challenges we face have increased significantly since 1899. Today, more than 2,000 Canadians are employed by Kodak Canada who make, sell, and service a variety of products to meet the needs of our customers. These products range from films and cameras to sophisticated digital imaging systems for the office, printing and publishing, and health care.

We are also significant exporters in Canada as Kodak Canada has the Eastman Kodak world mandate to manufacture microfilm which we ship to other parts of the globe in order to meet the exacting demands of Kodak's worldwide customers. The Canadian involvement literally stretches from "sea to sea" as we have sales and service locations in all major Canadian cities. Our company is a high-tech organization consid-

ering the products we offer and the technologies we employ to manufacture, service, and distribute them.

Kodak Canada has taken an innovative approach in addressing the continuing challenge of developing our most important resource - our people.

From a human resources standpoint, what does it take to run our company? The following table indicates the educational levels attained by Kodak personnel:

Category	Percent
Less than high school diploma	13.5
High school diploma (grade 12)	39.7
Ontario secondary school diploma (grade 13)	9.0
Community college diploma	14.0
Formal designations*	3.9
Bachelor degree	17.1
Masters degree	2.6
Doctoral degree	0.2
Total	100.0

* These designations would include various professional accreditations such as the Canadian Management Accountants, Canadian Institute of Traffic and Transportation, Member of Credit Institute, etc.

As one can see from this table, over 86% of Kodak's current staff have a minimum of a high school diploma. Its employees' high level of education is one of the key reasons Kodak has continued to excel in a very competitive atmosphere, both within the Eastman Kodak's global enterprise and the world at large.

Our people have a learning mindset which takes them beyond the formal learning environment and helps them adapt to technological change. Part of the solution to acquiring an intelligent workforce is in recruitment; Kodak Canada has been able to hire a workforce that is probably above average in its educational background; the other critical part is in the ongoing development of these individuals.

We have adopted as our key process the "Learning for Impact" model. Our approach has been influenced by the book, *Training for Impact*, by Jim and Dana Robinson (1989). We have purposely altered the title of our model because of the negative connotations about Training. As Malcolm Knowles said, "Training is for dogs and porpoises. Learning is for people." He also went on to describe learning as "a process of active enquiry".

Kodak Canada had a Training Department for many years before I joined the company in 1967. The decision was made just prior to my arrival in the department, in 1988, to discontinue any further delivery of programs by Kodak personnel. This has been adhered to with only a few exceptions. We will undertake the delivery of programs when we are the experts or it pertains to our business and it is important to add a "Kodak" flavour to the content. One example would be the delivery of some of the Manufacturing Resources Planning (MRP II) programs where it is important to give Kodak examples and applications.

Our decision to abandon internal delivery was based on a number of factors. First, the employees' managers needed to own responsibility for developing their staff's capabilities. Many managers felt that they could pass on the task of development to the Training Department and then return to their real job of selling, reducing costs, and administering of their area. Second, the courses being taught were not targeted or positioned appropriately for the participants. Frequently, the trainer did not have detailed knowledge of the subject and this was apparent to the participants. The measures of record indicated how much activity had occurred, rather than what was now being accomplished by the participants that they could not do prior to training. This approach led to a "Training for Activity" trap we had to escape.

The model that Kodak Canada adopted emphasized consultation; we reorganized and renamed the department, Education and Development. We also attempted to pattern our consulting after the approach advocated by Peter Block (1981) in his book, *Flawless Consulting*. This operating style emphasized development of partnership with the various line managers so our consultant will be viewed as a collaborator and

not as an "expert" or "a pair of hands".

Our major focus is to ensure that there is a business result that drives every learning experience we are supporting. The role the line managers play in this situation is absolutely critical for the learning experience to be successful. Managers must agree to the employee's need for the development, which in turn must be congruent with the managers' business plans and be financed from their departments' budgets. Our Education and Development consultant contracts for the manager's involvement and commitment by identifying the employee(s) performance deficiency and ensuring that it is something that can be addressed through a learning experience. We attempt to have managers understand that they have important roles to play in the process.

Once the learning experience has taken place, managers must provide opportunities for employees to use their newly acquired skills and to reinforce employee'e work when the new skills or behaviors are demonstrated. Our consultants coach the managers to make sure that these various elements are addressed in order to achieve the maximum result for funds spent on learning experiences.

At the high school level, Kodak Canada and the City of York's Board of Education are in the third year of a venture whereby our employees are being taught at their worksite. Through this partnership we have had approximately 50 students participate in the classes being offered. The results to date have been very positive.

Last year, we had our first students complete their Grade 12 credits and receive their secondary school diplomas. These graduates have had an impact on their fellow workers. This fall we had several employees inform us that they wanted to enrol in the program with the goal of completing their high school education. We had one foreman enrol - we felt he was a great role model for the people he works with. Our goal would be to eliminate that category of employees who do not have their secondary school diploma (Grade 12).

This program has been for volunteers who come forward to enrol in these high school courses. The company's position is to encourage and support employees in upgrading their academic qualifications by paying them for half of the time that they are in the classroom. In this way, the employees contribute some of their time, allowing them to build ownership of the program, and to take pride in their progress. We have also had a number of employees enrol in English-as-a-second language programs. These students tend to be recent immigrants to Canada who are already fluent in at least one other language or francophones who need to improve their written English skills.

Our key thrust is the development of skills for our workforce. This approach has taken a number of variations. One example resulted from an analysis of our workforce requirements in the maintenance area. Several years ago, it became clear that a multi-skilled approach to servicing our plant's equipment would be required. At the same time, we found some trades (e.g., painting and pipe insulating) were no longer needed. The incumbents in these positions were offered, at the company's expense, the opportunity to return to school to learn new skills. An arrangement was made with Humber College which proved to be mutually satisfying: Humber College provided the instructors and assisted in the development of the material and Kodak Canada provided a mentoring program at the job site. The Automatic Equipment Mechanics Program proved to be such a success that we initiated another program of a similar nature which started in the fall of 1991.

Another variation involved a project that included six people from a variety of jobs throughout our organization and taught them to be Information System Analysts. About three years ago Kodak Canada, like many other companies, was having a great deal of difficulty attracting and keeping information systems personnel at the professional level. We advertised internally for people wanting to make a career change into this field; a large number of people responded. With assistance from Humber College, we tested, interviewed, and selected the six candidates. The actual instruction was delivered by staff at Humber College. All six individuals were successful in their studies, completed the program, and moved into a professional job stream. Both of these programs have been of benefit both to the company and to the individuals involved.

There have been a number of programs that we have contracted out to various university faculties. A deficiency in skills became evident to both the manager and the sales people in one of our business units. As our customers' needs changed, they demanded less "technical information" (which has traditionally been one of our strong suits) and more information to how buying and using our products would impact their bottom line; in response we developed a program in conjunction with the Faculty of Administrative Studies at York University. This program focused on the understanding of the entrepreneurial approach to business and corporate finance. As a result, our sales representatives returned to their sales territories with a far better understanding of their customers' approach to managing their businesses and a much better grasp of the use of financial information as a selling tool.

Kodak Canada has sent a number of our senior people on advanced programs offered by some universities for "executive development". These programs have varied from Marketing to Manufacturing Operation to Executive Development.

The company's tuition aid program is another example of support for education; approximately 100 Kodak Canada people are involved in continuing to improve their education. We grant full tuition reimbursement along with 50% funding for prescribed textbook costs for all approved courses. People have used this method to complete diploma and certification programs and to attain undergraduate and postgraduate degrees.

I emphasize that my concerns have been expressed from the vantage point of a Canadian businessman working for a major manufacturing company in Canada. As a Canadian with a reasonable amount of national pride, I am concerned about our ability to compete for jobs in the global marketplace when new entrants often come into organizations with a severe deficiency of skills. A 1989 Statistics Canada survey showed that over 28% of our young people aged 16 to 24 years who were born in Canada were functionally illiterate and over 40% were innumerate. Many of these people were the very students who had recently graduated from our schools! Our high school dropout rate is approximately 30%. In Japan 95% of the students graduate from high school and in South Korea 98% do so.

Data for international achievement in science and mathematics show Canada performing at best in the middle of the pack when compared to other OECD countries. Our enrolment in engineering, mathematics, and sciences has been declining since the mid-'80s. Mexico is graduating more engineers per capita than Canada. A recent study (1992) by the Canadian Engineering Human Resources Board and Employment and Immigration Canada of the supply and demand for engineers in Canada through the 1990s indicated that by the year 2002 we would have a shortfall of 19,000 engineers.

Another concern is the current mindset around skilled trades. These are not dirty jobs that only dropouts can undertake. Canada already is falling short of having enough skilled tradespeople to meet the demand. The traditional answer was to recruit people from Europe and the United Kingdom. This is no longer possible. In 1988, Canada, for the first time in this century, had a negative immigration situation with Italy. More people emigrated to Italy from Canada than immigrated to Canada from Italy! Parents and students need to realize that the skilled trades offer a tremendous employment opportunity.

It was reported in *The Financial Post* in September 1992 that there were 1.5 million unemployed Canadians. The staggering statistic that followed really surprised me. There were 1.5 million jobs going unfilled in Canada because people did not have the required skills. Many of these jobs were in the skilled trades. One only has to require the services of a plumber or an electrician to realize that there are very good wages to be had in these occupations. Looking under the hood of a car gives some of us, even those with a technical bent, the shivers as we contemplate the sophisticated electronic components that are now involved in the automotive industry.

What we need in Canada are more initiatives promoting the joint efforts between high schools and apprenticeship programs. One more example: in Germany the average age is 17 for an apprentice entering a trade while in Canada it is 28. For many young people this 11 year gap is

taken up with a series of low paying, service-sector jobs such as working in fast food outlets trying to eke out an existence before realizing the benefits of a trade and enrolling in an apprenticeship program. What a waste of time this is! Eleven productive years in a trade have been lost —a frustration to the individual and a lack of productivity for our nation.

If Canada is going to achieve significant improvements in the international arena these situations will have to be addressed. If the future for Canada depends on developing highly skilled people in order to earn a high standard of living, then several stakeholders (parents, educators, business people, and government officials) will be required to make contributions for the future well-being of Canada.

Given the already high cost of education investing more money in educational systems is not the answer. We are already spending more on elementary and secondary education than most other countries in the world. Our taxes continue to rise at a rate considerably greater than that of inflation. Canada needs a radical rethinking of its educational systems. Alternatives are needed that will deliver the high quality required to make and keep us a competitive nation.

One of my major concerns is the political situation that surrounds our educational systems in Canada. As Canadians proved last fall in the referendum on the Charlottetown Accord, it is extremely difficult to reach a consensus on many aspects of our political structure. Without a clear and inspiring vision for a national educational policy for Canadians, I fear that we shall still be talking about these issues well into the next century. The world, unfortunately, will not wait for us.

We need cooperation between all levels of government. If Canada is going to have standards for education, then let us develop a set that can be applied throughout the country. The wrangling between various levels of administration, be it federal to provincial or provincial to school board, needs to cease. If there ever was a time for Canadians to come together on an issue, this is it. Everyone should have an interest in this subject. It is fundamental to the health and wealth of our nation.

The 21st century does not belong to Canadians but to the wise. In order to sustain even our current standard of living Canadians will have to learn like never before. It will be imperative for all of us to learn our living through education and the lifelong pursuit of knowledge.

As John Houseman used to say in television commercials, we obtain our money the old fashioned way: we earn it! Canadians need to put a new spin on those words — we get our standard of living the old fashioned way: we learn it!

References

Block, P. (1981) *Flawless Consulting: A Guide to Getting Your Expertise Used*. Austin, TX: Learning Concepts.

EMF Foundation (Annual) *World Competitivenss Report*. Cologny/Geneva, Switzerland: EMF Foundation.

Commission on the Skills of the American Workforce (1990) *America's Choice: High Skills or Low Wages!* Rochester, NY: The National Center on Education and the Economy.

Robinson, J. & Robinson, D. (1989) *Training for Impact*. San Francisco: Jossey-Bass Publishers.

Rugman, A. M. & D'Cruz, J. R. (1991) *Fast Forward: Improving Canada's International Competitiveness*. Toronto: Kodak Canada Inc.

Commentary and Synthesis

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Complementing Volume I's international focus, this volume is devoted to education and work in Canada, especially Ontario. The prolonged recession and slow recovery in the last few years has created an environment in which persons and governments are searching for answers to Canada's unemployment problem – and education has come to be seen as a potential remedy, if not the panacea. But is this emphasis on education justified? Has correlation been confused with causation?

Alan Thomas opens this volume by reviewing Canada's history of linking education and the economy, noting that a false dichotomy between education and training has underlain government policies on workforce development since the turn of the century. Given that education is a provincial matter, the distinction between education and training served a useful political purpose, allowing the federal government to engage in training initiatives without provincial sanction. Yet, Thomas notes a curious inversion is taking place, with business and labour emphasizing the need for a broad, generic education for those being "trained", and a more narrow, economically useful curriculum for those being "educated". In addition, the traditional ordering, education before training, is being replaced with either a reversal – training before education – or full integration of the two in terms of lifelong learning. Thomas sees the irony in the evolution of our formal education system, derived from the patrician grammar school which was originally designed to serve the interests of leisurely reflection and civic participation, being accused of irrelevance to Canada's fight in the global marketplace. Its "uselessness" at one time reflected its high status, a luxury, it seems we can no longer afford.

Jim Turk explores the purposes of education more deeply in his essay, suggesting that those who see educating individuals as an inefficient equivalent to programming an automated machine tool are missing something vital and human. He despairs of the agenda he believes that business has for educational systems: to prepare good workers cheaply and to become a market for business products. The push for efficiency, he notes, has led to continuing reductions in the numbers employed by major corporations. Ironically, the boards of directors of many major corporations, including those of IBM, Westinghouse and General Motors, have been pressed to act by large investors — including teachers' pension funds. As Pogo said, "We saw the enemy, and it was us". In echoing Thomas's reminder that much of education is devoted to non-economic ends, Turk calls for restoring the civic, humane, and inspirational purposes to education.

The three papers by Thomas Powers, Kathleen Redmond, and Dianne Hounsome illustrate the practical problems of accomplishing the mixed ends to education championed by Thomas and Turk. Powers speaks of the evolution of the liberal arts curriculum (the classical *Trivium* of grammar, rhetoric, and logic, and the medieval *Quadrivium* of arithmetic, geometry, astronomy, and music) to the modern seven arts: logical problem solving, skill in communication in writing and speech, quantitative skills, and familiarity with the methods of natural sciences and the fine arts. He believes all subjects, including technical subjects, can be taught in a "liberal" way. He decries universities' sell-out to the market as they abandon their commitment to the liberal arts, as they let the academic competition decide what courses students take. He argues persuasively for

the utility of the liberal arts but, like Turk and Thomas, suggests that what counts most in the long run is the importance of the liberal arts in guiding us, individually and collectively, toward worthwhile ends for our lives, organizations, and societies.

Hounsome and Redmond, two former students in the program in hotel and food management in which Powers teaches, relate their perspectives as employer and as former student. Their emphasis on the practical side of their curriculum reflects the utilitarian perspective of professional programs; their silence on the role of liberal arts in their education makes one pause, given Powers eloquent plea. Yet, their analysis of the characteristics that they would like in their employees and of the aspects of their education that they found most valuable, the "modern" seven liberal arts that Powers identifies are evident. And, Hounsome's preference for the case study methods echos not only Powers' hope that the liberal arts can be integrated into the professional curriculum, but also Thomas' notion that holistic education may provide an integrative approach.

Modes of integrating learning about careers, work, and life into the formal education system – the inverse of the problem addressed by Powers – is the theme of the policy paper by Aryeh Gitterman, Marion Levi and Suzanne Ziegler, three persons concerned wtih breaking down one of Thomas' dichotomies. The notion that education is somehow opposed to work, that two solitudes exist, is a common thrust of commentators, as noted earlier by Turk. Drawing on Dewey and others, Gitterman *et al.* reflect a view that work is as much an expression of our humanity as formal learning, and that much more can be learned and taught if existing barriers are overcome.

Avis Glaze provides a clear set of objectives for measuring the success of career education policies, already on the books in Ontario: equity of outcomes in the form of success for all students in all aspects of their lives including a productive and self-sustaining role in society. Reform is needed to align educational practice with the aspirations set for it in Ontario's guidelines for guidance programs. A special focus must be placed on those who are most likely to encounter stereotypes and neglect in education, at home, and in the workplace.

Margaret Schneider develops Glaze's notion of equity more fully in the case of women who wish to enter into traditionally male-dominated trades, such as construction and carpentry. The women Schneider has interviewed have been on a voyage of discovery: personally, educationally, and socially. Their pioneering efforts to open up new frontiers for women in employment are often challenged, but usually rewarding in the end. Conventions that foreclose options for anyone are unacceptable, but their subtle development is only now being mapped.

Also unexplored is what E. Lisbeth Donaldson refers to as the "underground passage" from school to work: part-time employment. Neglected by educators as a valid learning environment, part-time work appears to be more than an economic activity for youth since it provides them an opportunity to experience the working world first hand. The gulf between education and work, alluded to by Gitterman *et al.*, is evident here. Sometimes, the competition is direct and youth must make choices. Once more we hear the author's call for more integration, for a holistic view.

Douglas Stephens closes the volume with a renewed call for recognition of the need we have for a well-educated populace if we are to maintain a high standard of living. Employees must be productive to produce the wealth that supports not only our schools, but also our cultural, social, and health care institutions.

Old dichotomies don't work. The interrelationships among work (paid and unpaid), learning (education, training, life experience) and the broader social, economic, political and cultural worlds in which we live are impossibly complex. Pitting one against the other, as occurs when dichotomies are used, is unproductive. Syntheses are needed that redefine relationships, such as those suggested by Thomas, Glaze, Gitterman, *et al.*, and Powers.

Circumstances will not wait for an entirely new approach to work and education that would incorporate all of the ideas for change suggested in these two volumes. Nevertheless, as we go

about adapting secondary schools, implementing a training and adjustment system, and reorienting elementary schools, we should do so with an attitude that gives dignity to all forms of productive activity and which emphasizes continuous learning throughout each individual's life. Not all attempts will succeed, but we will rest knowing that we tried our best and did not ignore the evidence at hand.

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